

The University of Chicago

THE INVESTMENTS
OF LIFE INSURANCE COMPANIES

A PART OF A DISSERTATION SUBMITTED
TO THE FACULTY OF THE SCHOOL OF
BUSINESS IN CANDIDACY FOR THE
DEGREE OF DOCTOR OF PHILOSOPHY

1933

By
EUGENE TRYGVE HALAAS

Private Edition, Distributed by
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CHAPTER I

INTRODUCTION

A. The Nature and Sources of Insurance Funds.

The nature of the accumulated funds of life insurance companies has frequently been misunderstood, largely because of the ignorance of the general plan of life insurance. Tax legislation affords in some instances striking examples of this. Certain legislators have seen companies "wax strong and rich." This has suggested a fruitful source of income justified presumably, by the tax principle of "ability to pay."¹ Another misconception is that which assumes that trust funds and insurance funds are synonymous. Though such an association comes near to being a fact, it is, however, sufficiently inaccurate to cause some loose thinking concerning insurance company investments. Legally, the funds acquired through the collection of premiums, become the property of the corporation. The obligations of an insurance company are therefore entirely contractual and, as such, it stands in much the same position as any corporation toward its creditors. The fact, however, that the "trust fund" concept is used extensively in connection with life company investments does suggest something of their true nature which is best indicated by an examination of the theory underlying the operation of legal reserve insurance.

Life companies have been organized principally under either the assessment or legal reserve plans, although the former plan, which was typically represented by the fraternal orders, is now practically extinct. Assessment insurance gives rise to no investment problem since assessments are presumed to be paid out immediately to take care of death losses and other expenditures. It is only when the legal reserve basis of operation is employed that the investment aspect of the business becomes important.

The legal reserve had its origin in the method of premium payments. Since it was found that assessments to take care of mortality losses became onerous in the more advanced ages of the insured members a plan was devised to level off such assessments

¹This attitude has been particularly noticeable in recent years in connection with bills introduced having as their avowed purpose that of "soaking the rich."

so as to establish a uniform rate throughout the insured periods. This necessitated a prepayment of insurance costs during the earlier years of the policy to provide for the later years when the annual payments would be less than the costs created by the policy. As a consequence these prepayments resulted in the accumulation of resources to be disposed of, theoretically at least, when contracts matured at varying future dates. Not only was it necessary that these resources be held intact but the assumption was made that they would be invested to yield a specified rate of interest. Investment earnings therefore came to assume particular importance since they were given effect to in the schedule of premiums thereby causing the adequacy of the net reserves to become dependent in part upon them.

The legal reserves then contemplate two things, the accumulation of certain funds in advance through premium charges, and the addition to such funds by a predetermined amount accruing from their investment. Both are essential to the fulfillment of contracts and suggest the importance of the investment factor that must enter therein.¹

The investment importance of the policy reserves is indicated by the following data which show their relationship to the total invested assets of four life insurance companies which may be taken as fairly representative of all American companies. The figures are for 1931.²

¹ Insurance contracts may be classified on the basis of the relative importance of the "investment element" that enters into each. Term insurance on an annual basis possesses no investment element, or, what amounts to the same thing, no "cash surrender value." Endowment policies, on the other hand, stress the investment feature, premium charges being therefore considerably higher than term insurance costs for an equivalent amount of insurance protection. It is clear, however, that any contract calling for a level premium will automatically create a temporary surplus due to excess premium payments. This is even true of term insurance taken out for a number of years where the insured contracts to make even payments throughout.

Several writers have seriously questioned the advisability of investing through the medium of a life insurance company. For a clear presentation of the issues involved, see: S.H. Nerlove, "Investment Element in Life Insurance," Journal of Business, 1928, pp. 273-293. W.R. Scudder, The Fallacies of Life Insurance, (Privately printed, 1913), pp. 176-184.

² Spectator Insurance Year Book, 1932.

TABLE I

RATIO OF RESERVES TO INVESTED ASSETS AND ADMITTED ASSETS
OF 4 LIFE INSURANCE COMPANIES, 1931
(000 omitted)

Company	Invested Assets	Total Admitted Assets	Net Policy Reserves	Ratio of Reserves to Invested Assets	Ratio of Reserves to Admitted Assets
Mutual Life	\$1,072,395	\$1,106,236	\$ 918,703	85%	83%
N.Y. Life	1,824,866	1,890,144	1,483,832	81	78
Mut. Benefit	564,703	589,980	493,662	87	83
Northwestern Mutual	941,213	977,265	807,403	85	82

It will be noted that approximately 85 per cent of the invested assets constitute direct claims of the policyholders.¹ Since the total assets held by a company at any one time, such as a portion of the cash holdings and certain claims upon which no interest accrues, are not all invested, the ratio of reserves to the total admitted assets is correspondingly lower as is seen when the two percentage columns are compared.

Although the legal reserves constitute the primary investment source there is, however, a remaining source represented by accumulations shown on the statements as "surplus" and/or "reserves for contingencies."² In a mutual company the surplus also

¹Although the suggestion is that policy claims are attached to life insurance contracts as such, it must not be overlooked that a certain minor portion of such claims arises out of annuities. Owing, however, to the fact that the income flowing to the companies in consideration of annuity contracts is of relatively small consequence, (about 3 per cent of the aggregate income of all American companies in 1930) the discussion will center on operations as if they involved life contingencies entirely.

²There is also a third source, not readily identified because no insurance company financial statement lists it, which gives rise to a sum that accrues annually because of a lag between premium and death payments. In certain respects it is much similar to the item known in the accounts of fire insurance companies as "unearned premiums." Owing to the difficulty of handling this item, it will not be considered in this study as a separate source of funds.

represents a claim of the policyholders, differing from the policy reserves only in the sense that it is not specifically required by law as security for policy claims.

The fact that most states have required mutual companies to declare dividends annually has had the effect of checking any large holdings of surplus funds. This situation is made doubly effective by legal enactment specifying that there be a definite ratio existing between the surplus and the net policy reserves. Illustrative is the New York law which requires that the surplus be held at a certain per cent of the net policy reserves, the ratio varying with the size of the net reserves.¹ Aside from insuring that the policyholder will receive annual dividends, the law removes the possible danger that companies may be inclined to accumulate large excess funds leading, as the presumption runs, to inordinate speculation and wasteful practices.

From the foregoing it is therefore seen that insurance funds are clearly anything but the inordinate profits of "big business," that may be taxed with impunity. Again it is to be noted that a contractual relationship exists between an insurance corporation and its policyholders at the core of which are the funds deposited to assure contract fulfillment. The purposes for which insurance is carried suggests in turn the great responsibility of "trusteeship" assumed by the companies in the administration of their resources.

B. The Growth and Present Extent of Life Insurance Funds.

The significant position of American life insurance companies as investment agencies is evidenced by the extent of their total admitted assets which in 1931 amounted in the aggregate to \$20,159,939,000. The greatest portion of this large accumulation has been added in a comparatively short period of time. The following data are illustrative:

¹Consolidated Laws of New York, Chap. 30, Sec. 87.

TABLE II

ASSETS, RESERVES, AND SURPLUS
OF ALL AMERICAN LIFE INSURANCE COMPANIES 1900-1931¹
(000 omitted)

Year	Number of Companies	Total Admitted Assets	Net Policy Reserves	Surplus	Rate of Increase of Assets (5 yr. periods)
1900	76	\$ 1,742,414	\$ 1,443,452	\$ 249,035	--
1905	112	2,706,186	2,295,289	333,613	55
1910	214	3,875,877	3,225,966	490,055	43
1915	238	5,190,310	4,362,255	541,786	34
1920	272	7,319,997	6,337,970	743,026	41
1925	308	11,537,614	9,926,515	1,233,933	57
1930	352	18,879,611	16,231,488	1,825,382	63
1931	342	20,159,939	16,722,843	1,859,277	5 ²

Taking the five year periods as a basis of comparison it is seen that total assets have grown at an accelerated rate since 1915 and that during the past decade assets have more than doubled. The tremendous strides life insurance has made in this country in recent years is due to a number of reasons of which the increase in the national wealth and income is among the most important factors. That an increasing relative portion of the national wealth has been going into insurance is indicated when the rate of growth of insurance funds is compared with the growth of national wealth. The latter was 88½ billion dollars in 1900 and an estimate for 1930 is 360 billion dollars. In the period, therefore, from 1900 to 1930 national wealth had a fourfold increase during a time in which the insurance companies increased their admitted assets eleven times.

At the insurance end of this development one finds that insurance in force for 1930 was \$107,948,777,000 as compared with \$58,866,069,000 in 1925, an increase of 83 per cent for the five year period. Total premium payments increased from \$2,383,912,857 in 1925 to \$3,524,326,635 in 1930. Likewise the total number of policies in force in 1925 was 23,893,639 which increased to 32,776,335 by 1930.

The relative importance of life insurance companies as investment institutions is quite marked when they are compared with

¹ Spectator Insurance Year Book.

² Percentage increase over 1930.

the principal groups of financial institutions in the country. One will find, for example, that the total resources of all American life insurance companies were only exceeded in 1931 by the combined resources of National banks as a group. Total life insurance resources did, however, exceed the total resources of such groups as, (1) State Banks, (2) Mutual Savings Banks, (3) Stock Savings Banks, (4) Loan and Trust Companies, (5) Private Banks, (6) Joint Stock Banks, (7) Federal Land Banks, and (8) Building and Loan Associations. Furthermore life companies were in 1931 the largest institutional holders of (1) Railroad Bonds, (2) Public Utility Bonds, and (3) Farm Mortgages.

Not only as a group do life insurance companies show an impressive investment volume, but, taken singly, certain companies have attained considerable size. In 1931 five had each passed the billion dollar mark in terms of assets. The following tabulation arranges these in order of size and indicates their position in comparison with some of the leading financial and industrial organizations of the country.¹

<u>Life Insurance Companies</u>	<u>Assets 1931²</u>
Metropolitan	\$3,590,115,653
Prudential	2,692,698,220
New York Life	1,909,124,242
Equitable	1,400,232,747
Mutual Life	1,106,236,049

<u>Financial & Industrial Companies</u>	<u>Assets 1931³</u>
American Telephone & Telegraph	\$5,024,335,551
Chase National	1,988,669,180
U.S. Steel & Subsidiaries	2,279,802,813
National City Bank	1,857,975,421
Standard Oil of New Jersey	1,919,010,368
General Motors	1,300,267,222

It is clear from these figures that large scale enterprise is by no means absent from the life insurance field. Although the Insurance Year Book reports over 342 companies operating in 1931 this same source reveals that 27 of that number control

¹The comparison made between the resources of life insurance companies and other enterprises must of course be limited merely to a comparison of dollar totals. No suggestion as to the comparability in the character of the assets making up such totals as intended.

²Spectator Insurance Year Book, 1932.

³Moody's Manual of Banks and Industrials, 1932.

approximately 85 per cent of the total insurance resources of the country.¹ This concentration is deserving of some notice for it suggests the extent of investment diversification that is thereby made possible, a point, presumably, of considerable advantage to the companies in the maintenance of financial stability.

C. Purpose and Scope of Study.

The two preceding sections point essentially to the great investment importance of life insurance companies and the close interest that ties them to individual policyholders. The vast accumulations of life companies represent in fact the aggregate savings of thousands of persons, such savings having been made as provision, in most instances, for old age and dependents. Therefore, as custodians of funds of such a character, life insurance companies have indeed a great investment responsibility. The manner in which such responsibility has been administered should be a matter of considerable importance and interest. It is therefore the purpose of this study to investigate, and to measure the results of the investment policies and practices of life companies established in the United States.

The far reaching scope of the subject requires, however, that certain definite limitations be set up within which the analysis is confined.

There is first, the limitation relative to the specific period of time to be included. This study concerns primarily the investment activities of the companies from 1915 to and including 1931, with enough attention given to earlier years to afford some background for more effective interpretation of investment trends.

The second limitation concerns the degree of emphasis to be placed on descriptive analysis on the one hand, and a critical appraisal of investment policy on the other. Interest here centers however, on the descriptive side of life insurance company investments. All necessary data are brought together to show precisely how the companies have invested their funds and are supplemented by such material as is available, to indicate the degree of success which they have achieved in their operations.

Finally the third limitation relates to the matter of selecting for special study a suitable number of companies which will be sufficiently representative of all. To proceed along the lines of separate company appraisal of all American companies, (there were 342 in 1931) is prohibited by the extent of the clerical work involved as well as by the incompleteness of the available

¹ See Appendix I-B.

data. Then too, it is doubtful whether such a study would yield any information more significant than that which would rely on the only alternative, that of selecting a limited number of representative companies and treating them largely in the aggregate. It is this latter method that is employed here. That diverging policies exist is recognized at certain points by breaking up the group into classes or even by considering companies individually.

The fact that a small number of companies together control by far the greatest portion of the total insurance resources in the country facilitates the use of the sampling method. The further fact that the larger companies transact business in the state of New York which furnishes perhaps the most complete insurance reports available assures that the required data will be available over a sufficiently long period of time. Accordingly, twenty-seven companies constitute the sample for special study with other groups selected to supplement the special study at certain points. All the companies in the group of twenty-seven transact business in New York state and together have always controlled from 85 to 90 per cent of the invested assets of all American life companies. The selection of this group also affords an opportunity to connect up at certain points this study with that of Zartman.¹ His investigation of insurance company investments was based on an examination of twenty-nine companies doing business in New York state, and covered the period from 1860 to 1904. All but four of the companies in the Zartman group are included in the present selection.

The following study is divided into essentially three parts. The first, incorporated in the following chapter is of a preliminary nature being a consideration of the factors of social control which have played an important role in the establishment of investment policies. The second part includes Chapters III, IV, and V and is a descriptive presentation of investment policy. Chapters VI and VII may be said to constitute the third part of the study and are devoted to an examination of the results of such policies as the companies have instituted. A concluding chapter summarizes the principal findings and includes a brief critical appraisal of current investment practice.

¹Lester Zartman, Investments of Life Insurance Companies (New York: Henry Holt & Co., 1906).

CHAPTER II

LEGAL CONTROL OF LIFE INSURANCE COMPANY INVESTMENTS

A. Purpose of Chapter.

Because of the fact that life insurance companies are virtually "trustees" of funds belonging to policyholders some degree of governmental regulation has been instituted. This has taken the form of state laws prescribing or prohibiting the investments which the companies might make. In addition to direct investment legislation most states have established an executive branch, commonly known as the state insurance department, whose function it is to supervise within their jurisdiction the operations of life companies. The purpose of this chapter will be to first present the attitude of the different states with respect to the suitability of different types of securities for life company investment, and second, to enumerate briefly the principal functions of the State Insurance Department as it concerns the investments of the companies.

B. State Laws Governing Life Insurance Investments.

A list of the investments which most states recognize as suitable for insurance funds would include the following:

(1) Real Estate Mortgages, (2) United States Government Bonds, (3) State and Municipal Bonds, (4) Railroad Bonds, (5) Public Utility Bonds, (6) Real Estate, (7) Policy Loans, and (8) Collateral Loans.

A list of the investments not so generally permitted are: (1) Foreign Government Bonds, (2) Industrial Bonds, (3) Leasehold Bonds, and (4) Stocks.

Real estate mortgages are permitted as investments for life companies in all the states but limited to "improved real estate" in sixteen and to a certain portion of the companies' assets in one.¹ Some differences exist as regards the percentage of value that may be loaned on, this ranging from fifty to seventy per cent with the greatest frequency centered at fifty.

United States government bonds are permitted in all states. State and municipal bonds are similarly permitted but subject to

¹Vermont General Law, 1917, Sec. 5363.

certain restrictions in seventeen. Limiting provisos generally concern previous defaults, minimum population and the indebtedness of the issuing unit.

Railroad bonds are allowed in forty-three states but prohibited in Arkansas, Kansas, Maryland, Ohio and Oregon. Several of the states which do permit this type of investment have provided certain checks in the form of mortgage and/or prior earning requirements.

Public utility bonds occupy a position analagous to railroad bonds in acceptability with similar limitations.

Real estate holdings are permitted in every state with the customary proviso that all holdings must have been acquired for business purposes and/or in satisfaction of debts, and that all unnecessary real estate shall be disposed of within a specified period, usually five years.

Policy loans really arise from the insurance end of the business and therefore occasion no investment problem as such. Since policy loans are fully covered by reserves on individual policies there obviously exists no reason why any prohibition is called for other than that loans may not be made in excess of reserves. Such a limitation is law in all of the states.

Collateral loans are allowed in most states and generally on securities which the companies are authorized to buy. Several states place limitations on the loans varying from eighty to ninety five per cent of the market value of the collateral.

Among the classes of securities that are not so generally recognized by the states as suitable for life company investments are foreign government bonds. Some distinction is made in certain instances, however, between Canadian and other foreign government obligations. Whereas twenty-nine states permit the purchase of Dominion bonds only twenty-two are favorable to other foreign government securities. It may be added that securities of foreign political subdivisions are generally subject to limitation similar to those attaching to state and municipals of this country.

Several states have definite limits as to the amounts that any company may invest in a foreign country. The law of Indiana limits the amount to two per cent of a company's assets in bonds of one country and to a total of ten per cent of the assets in bonds of all countries.¹ New Hampshire has a law quite similar. Her statute reads:

"Not exceeding in aggregate 10% of the 'deposits' shall be invested in the bonds of Canada and providences and cities."²

¹See Sec. 9154, Indiana Laws. ²Chap. 262, Pub. L., 1926.

Since "other" foreign government securities are prohibited, the limitation applies only to the Canadian investments.

Investments in foreign countries are in several cases limited to the amount that may be required to do business in them. The Colorado statute specifies,

"In such other securities and investments as may be necessary to comply with the laws or departmental rulings of other states or nations in which the company may do business."¹

The California law also specifies,

"so much of its funds as are required to meet its obligations incurred in such foreign country and in conformity to the laws thereof, in the same kind of securities issued in such foreign country that such company is by law allowed to invest in this state, and subject to the limitation imposed by law in this state."²

Eleven states prohibit industrial bonds. Of these eleven, only two, Maryland and Delaware, are in the east. There are invariably one or several limitations. Common among these are, (a) limitations as to earnings or dividend of issuing companies,³ (b) restrictions in relation to the degree of security back of issue,⁴ (c) kinds of enterprise.⁵

Mortgage bonds and loans on leaseholds are not as generally recognized as mortgages which are permitted in all states. Mortgage bonds are allowed in twenty-five states while leaseholds are legal in only fifteen. Both classes where permitted are frequently limited to "improved real estate."

¹ Session L. of Colorado, 1925, Chap. 117, p. 317.

² St., 1929, p. 1278.

³ From the Nebraska Law, Sec. 7775. "Bonds of a solvent industrial corporation incorporated under U.S. Law provided it has earned 4% on all capital stock for five years past or \$5,000,000, whichever is greater, and if it has not defaulted in principal or interest, and as otherwise described."

⁴ From the North Dakota Law, Chap. 146. "Mortgage bonds of dividend paying industrial or public utilities incorporated under U.S. or state laws--not to invest in or loan upon bonds or obligations inadequately secured."

⁵ From Missouri Law, Sec. 6126-6126a. "Bonds of any private public, or quasi-public corporation organized under United States or state law, if no interest, default for five years preceding---Investment in mining, oil, or 'exploitation' company bonds or other obligations prohibited."

Finally the attitude of the law regarding life company investments in corporation stock is interesting to note in view of the degree of attention this question has received in recent times. The fact that only a very small percentage of stocks are held in the aggregate by companies would suggest that here at least the law has been responsible, presuming that if control had not been instituted insurance managers would have resorted more freely to this type of security. However, at the present time only thirteen states prohibit all stocks. They are Arizona, Iowa, Kansas, Maryland, Montana, Nevada, New Mexico, North Dakota, Ohio, Oregon, South Dakota, Tennessee and Wyoming. Of the remaining thirty-five only seven can be said to admit all stocks without considerable limitation. These are Alabama, Florida, Louisiana, North Carolina, Rhode Island, South Carolina and Virginia. For the most part, however, limitations obtain varying in extent of liberality but generally sufficiently effective to cause stock holding to be at a minimum.

Some states recognize only stocks of corporations in certain lines of business. For example, the Idaho law names "stock of corporations organized under United States or state law, except stock of oil, or mining, or fish, fruit or vegetable canning corporations."¹

Quite frequently there are limitations as illustrated by the Nebraska law which specifies, "Not to invest more than ten per cent of its assets in combined total of preferred and common stocks."²

The New York law limits stock investments to guaranteed and preferred stocks but omits that privilege as far as common equities are concerned.³

From the foregoing examination of the present attitude of states, with respect to the nature of the securities deemed suitable for life company portfolios, two conditions are especially marked. In the first place, it is quite apparent that bonds, as a class, occupy a favored position. This is to be expected, perhaps, in view of the traditional viewpoint that fixed obligations are in their very nature a more conservative type of investment than equities. The generally favorable recognition of government securities as well as mortgage obligations of the older industries, particularly railroads, arises, no doubt, from the fact that they are the older forms of investment, tried and true, and presumably

¹Idaho Laws, Sec. 4964.

²Neb. Laws, Sec. 775.

³New York Laws, 1928, Chap. 30, Sec. 100.

meet the standards set up for safety and certainty of principal and income. In the second place, the unanimous acceptance of farm and other real estate mortgages is noteworthy. This fact is perhaps to be attributed to the traditional viewpoint that real estate mortgages are essentially proper for "trustee" funds.

C. The State Insurance Department.

The statutes of each state provide for the supervision of insurance companies. The supervising authority is generally vested in an insurance commissioner, who is the chief executive officer of the department. Each state insurance department not only exercises its authority over all companies domiciled in the state but also over all companies of other states which are doing business in the state.

The chief object in view in creating separate insurance departments and in delegating to them extensive powers of regulation was to protect the public against financially unsound enterprises. Those powers which apply specifically to the investment activities of the companies are incorporated largely in the two functions, viz: (1) the approval of investments, and (2) the appraisal of assets.

1. The Approval of Investments.

There is considerable variation in the scope of authority which the commissioner is given to approve or disapprove securities. Thus one finds that the Minnesota statute provides that "all authorized investments shall be approved by the insurance commissioner."¹ On the other hand, Illinois specifies certain investments and adds "or any such other stocks or securities as may be approved by the insurance commissioner."²

The investments in real estate frequently present situations that call for the exercise of the discretionary authority of the commissioner. As was previously indicated most state laws limit the amount of real estate a company may own usually to the amount requisite "for its convenient accomodation in the transaction of its business."³ Such an indefinite standard naturally assumes that the supervisory authority of the insurance department shall determine finally what in each individual case "convenient accomodation" really comprehends.

Another provision calling for the application of an indefinite standard is the one, found generally in most of the

¹Minn. Sec. 3313.

²Ill. Sec. 176.

³Idaho, Sec. 4966.

state laws, to the effect that the commissioner may extend the time for disposing of real estate beyond the limit fixed by the statute, if the interests of the company will suffer materially by a forced sale thereof.¹ What constitutes the interests of the company is of course a matter for the commissioner to decide. Should such interests be contrary to the interests of the policyholders--a situation which may easily occur--the commissioner must determine which of such interests shall be made subordinate. Usually it is assumed that the welfare of the policyholder comes first and decision is made accordingly.

2. The Appraisal of Assets.

The annual report made by the companies to the various state departments represents the principal device by which the character of the investments may be properly checked and evaluated. Aside from this there remain general correspondence and company inspection. The latter, however, is required in most states only at lengthy intervals, usually three years.

The type of statements required have undergone considerable modification since their inception in 1852 when the insurance commissioners of New Hampshire called for the annual publication of reports.² The need for uniformity in statements was keenly felt as soon as state supervision was generally adopted. This need arose logically from the fact that the operations of the companies were not confined as a rule to any one state but were extended over many. Uniformity then was desirable both from the standpoint of the companies as well as from that of the various state departments to which reports were made.

Through the cooperation of a number of state commissioners which is now effected through the annual convention, uniform report forms were quite generally adopted by 1875. The first blanks used consisted of the balance-sheet life form, employed for some eight years. After 1883, however, conditions changed until it became necessary to develop what is now known as the "Convention Blank," which has continued in use, with some modifications, up to the present. Practical uniformity in annual statement blanks is an accomplished fact although slight variations are made by some states.

The Convention Blank after calling for the names of the company, directors, officers, home office, and other information of a like nature, requires the statements covering these points:

¹Id. Sec. 3670.

²Proceedings of the National Convention of Insurance Commissioners, 1929, p. 39.

"Income," "Disbursements," Assets," "Liabilities," and "Gain and Loss Exhibit," together with a number of schedules which are made up of more detailed particulars of certain items to be found in the accounts, and in part of additional information not bearing directly on the financial statements.

Of particular interest are five schedules which serve to indicate in some detail the significant data associated with the worth of the investments made during the year and of those carried on the books from previous periods.

Schedule A calls for rather complete data on a company's real estate investments. The schedule itself is divided into three parts. Part I shows all the real estate owned, its cost, book and market value, as well as the nature and amount of all liens and encumbrances that may be on it. Part II shows all real estate acquired during the year and the amounts expended for additions and improvements. Part III includes all real estate sold as well as the amounts received as part or full payment.

Schedule B requires a complete description of all real estate mortgages held, as well as those sold during the year. Such data as the amount of the principal, the amount unpaid, the security, and the status of the interest payments are included.

Schedule C calls for much the same information on collateral loans.

Schedule D gives the description of each bond and stock owned, acquired, or sold during the year. In addition, the cost, book, and market values are indicated. Information is also given relative to interest and dividend payments as well as all adjustments made during the year.

Schedule E indicates the amount of each bank balance as of the date of the statement as well as the largest balance carried for each month and the rate of interest received. Finally, information is given as to the total amounts that are carried without interest.¹

It will be noted that in the various schedules of the ledger assets the market and the book values are called for. For statement purposes book values are employed but in certain cases market values must be reflected in the statement. The detailed account of the securities held and their values does then enable the state insurance executive to maintain a reasonable degree of surveillance over the investment activities of the companies.

¹Twelve other schedules are called for, but since they are not particularly relevant to the investments of the companies they will not be considered here.

CHAPTER III

THE CHARACTER AND TREND OF INVESTMENTS

A. Purpose of Chapter.

The preceding chapter has indicated the classes of securities available for life insurance company investment, pointing out the limitations attached to various of them. Aside from legal control, however, investment policy is largely independent. It is essentially with this last feature of investment administration that the present and the following three chapters will be concerned. The present chapter will deal entirely with investment policy as it has caused funds to be proportioned among the various classes of securities.

B. Source of Material and Procedure Followed.

Material for this study has been obtained, in the main, from the New York State Insurance Reports. Twenty-seven companies are included in the study from 1903.¹ Earlier data presented are taken from Zartman's Investments of Life Insurance Companies.² The principal computations are shown in Tables III and IV. Table III indicates the percentage distribution of the total admitted assets among the various investment classes recorded from 1860 to and including 1931. Table IV indicates the rate of growth of the total admitted assets as well as the different classes of which they are composed.

The procedure followed in the course of this analysis will be that of a separate study of each of the natural divisions of the investment portfolio. The figures and ratios will be taken from the tables mentioned above unless otherwise noted. Since the object here is primarily to present the investment picture the analysis will be primarily descriptive rather than critical.

In order to project individual company policy, which the tables of aggregates fail to show, a later section will present a narrower classification of the companies, thereby indicating how proportionate holdings of securities vary among the group. Some

¹See Appendix I-A for list of companies* and their relative size at the end of 1931.

²Henry Holt & Co., New York, 1906.

attention will also be given to the investment trends of a group of representative small companies which are not included in the main study.

C. Uninvested Assets.

Cash and "Other Assets," the first two items enumerated in Table III may be designated as uninvested assets. Although a portion of the cash balances held is placed on deposit at interest, the income so realized is on the average of small relative importance. Outstanding premiums and accrued interest are the principal items represented by "Other Assets." At the present time total uninvested assets constitute a small percentage of the total assets.

The relatively high percentage of uninvested assets obtaining in the earlier history of the companies was in large part due to large cash holdings. The Armstrong investigation of New York insurance companies in 1906 disclosed the fact that cash represented as much as 10 per cent of the total assets of certain companies.¹ Further investigation showed that in the majority of these companies such funds were deposited in banking or trust institutions with which the officials of the insurance companies were affiliated.² That these funds were diverted for purposes of promoting questionable transactions seemed clear and the exposure which followed is reflected in Table III which shows a drop in percentages of cash held from 4.78 in 1903 to 1.96 in 1906. It was contended at the time by the companies that often, owing to the bad condition of the securities market, it was to the policyholder's interest to hold back funds from investment until more favorable market conditions prevailed. There was some merit in this argument, but it was refuted in this particular instance by showing that the policy of holding back funds has been a consistent one which the securities market certainly had not justified. The decline in the cash ratio, however, has been quite consistent since 1903 with the lowest recorded ratio of .59 per cent obtaining for 1930. Considering the volume of cash that an insurance company turns over, such a low figure is quite extraordinary.

Deferred and outstanding premiums formed too large a proportion of the assets in 1860 and 1870. In 1869, 10 per cent of the assets of all the companies reporting to the New York

¹ See Report of the Joint Committee of the Senate and Assembly of the State of New York, 1906, p. 95.

² Ibid.

OF 27 LIFE INSURANCE COMPANIES, 1860-1931

[illegible]

TABLE III -- Continued

1915	1918	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931
1.89	1.01	1.13	1.12	.96	.86	.78	.62	.66	.65	.63	.59	.77
2.96	3.91	4.12	4.66	4.69	4.92	5.12	5.27	5.22	5.41	5.33	4.71	5.83
4.85	4.92	5.25	5.78	5.65	5.78	5.90	5.89	5.88	6.06	5.96	5.30	6.60
15.16	12.36	12.84	12.67	12.28	12.08	11.88	11.81	11.81	11.93	13.08	14.27	16.00
2.70	2.31	1.81	1.57	1.57	1.52	1.50	1.58	1.69	1.79	1.84	2.07	2.49
		16.76	16.88	18.02	18.15	17.13	18.06	14.72	13.11	11.84	10.76	8.80
		16.25	16.95	18.64	20.28	22.74	25.81	27.32	28.53	29.36	29.06	27.89
32.56	30.06	33.01	33.83	36.66	38.43	39.87	41.87	42.04	41.64	41.20	39.82	36.69
31.12	28.49	23.61	23.20	22.73	22.71	21.85	21.19	20.32	19.41	18.28	17.40	16.48
3.91	3.51	2.93	3.41	3.90	4.72	5.97	7.12	8.31	8.97	8.80	9.23	9.20
.76	.70	.68	.78	.79	.88	.85	.88	1.13	1.27	1.47	1.55	1.71
35.79	32.70	27.22	27.39	27.42	28.31	28.67	29.19	29.76	29.65	28.53	28.18	27.39
.00	8.05	10.92	10.41	8.99	7.07	5.85	4.05	3.30	2.50	1.83	1.67	1.81
4.43	4.18	4.57	4.17	3.68	3.45	3.17	2.57	2.48	2.59	3.14	3.04	3.58
4.43	12.23	15.49	14.58	12.67	10.52	9.02	6.62	5.76	5.09	4.97	4.71	5.39
.06	.66	1.20	1.39	1.36	1.26	1.21	1.17	1.04	1.04	.85	.72	.76
.99	.89	1.01	1.2	1.2	1.2	1.2	1.16	1.36	1.40	1.60	1.72	1.74
1.05	1.55	2.21	2.59	2.56	2.46	2.41	2.33	2.40	2.44	2.45	2.44	2.50
1.84	2.29	1.14	.9	.7	.4	.3	.2	.2	.16	.20	.16	.15
.2	.23	.14	.1	.01	.01	.01	.01	.01	.01	.01	.01	.01
2.04	2.52	1.28	1.0	.71	.41	.31	.21	.21	.17	.21	.16	.16
3.09	4.07	3.49	3.59	3.27	2.87	2.72	2.54	2.61	2.61	2.66	2.60	2.82
7.52	16.30	18.98	18.17	15.94	13.39	11.74	9.16	8.37	7.70	7.63	7.31	8.21
.6	.6	.4	.3	.2	.2	.2	.2	.14	.26	.3	.45	.47
.3	.2	.14	.09	.07	.03	.03	.05	.05	.34	.52	.73	.88
.4	.3	.2	.09	.12	.2	.2	.15	.13	.16	.16	.16	.15
.1	.1	.13	.1	.1	.01	.01	.08	.08	.40	.74	1.70	1.11
1.4	1.2	.87	.58	.49	.44	.44	.48	.40	1.16	1.72	3.04	2.61
44.71	50.2	47.07	46.14	43.85	42.14	40.85	38.83	38.53	38.51	37.88	38.53	38.21
.2	.15	.2	.1	.1	.05	.04	.02	.05	.07	.03	.01	.01
100	100	100	100	100	100	100	100	100	100	100	100	100

Data from 1860--1900 from Lester W. Zartman, Investments of Life Insurance Companies.

Data for succeeding periods from the New York State Life Insurance Reports Covering Twenty-seven Companies.

TABLE IV
GROWTH OF ASSETS OF 27 LIFE INSURANCE COMPANIES

1909 = 100

	Total Adm. Assets	Real Estate	Farm & Other Real Estate Mortg.	Public Util. Bonds	R.R. Bonds	Misc. Bonds	U.S. Pub. Bonds	Foreign Gov't Bonds	Stock	Policy Loans & Premium Notes
1909	100	100	100	100	100	100	100	100	100	100
1912	120	102	132	117	115	104	136	112	66	128
1915	140	94	155	145	127	104	162	160	62	178
1918	173	99	175	159	143	118	551	253	66	179
1921	206	93	230	159	141	135	835	259	61	221
1922	223	87	254	200	150	168	851	294	44	236
1923	241	93	299	248	159	185	800	283	44	247
1924	264	100	343	328	174	226	724	276	43	266
1925	292	107	395	459	185	243	684	291	42	289
1926	324	125	461	607	199	278	554	302	50	317
1927	360	147	515	787	213	398	514	342	47	352
1928	398	173	566	942	225	496	512	386	147	394
1929	428	195	613	1010	232	624	541	416	242	473
1930	469	237	638	1142	238	768	544	442	355	555
1931	507	313	629	1210	241	840	710	484	416	677

department of this type.¹ The ensuing depression with its many failures in the insurance field brought home the fact that the business of insuring lives could not be transacted soundly on the basis of deferred premiums. At the present time this item is inconspicuous. It has been frequently stated that no American industry of any size can boast of such a small amount of uncollected items as can life insurance companies.

D. Premium Notes and Policy Loans.

Premium notes as an asset are of small relative importance.² In 1860 and 1870, however, they constituted over 20 per cent of total assets. The practice of receiving interest-bearing notes for premiums due was largely discontinued as a result of the experiences of the depressed years of the '70's which revealed how uncollectible premium notes really could be. There immediately followed a general revision of policy contracts which either abolished in full or greatly limited their use.

Policy loans were few in number before 1900. The mad scramble for business which characterized the years immediately following brought into existence numerous selling devices one of which was the increased emphasis placed on that clause in the insurance contract which provided for a cash surrender of reserves, and for the loan privilege. As a result one finds that policy loans representing 4.6 per cent of total assets in 1900 had increased to 15.16 per cent in 1915. Following the year 1918 the trend of ratios was downward until 1928 when a marked increase set in. The rise in the ratios during the depression years of 1930 and 1931 reflects the fact that in a period of business stringency the policyholders look upon their insurance as a reserve to draw upon in case of need. The problems that face the insurance managements by virtue of this situation are of major importance; these problems will be considered in some detail later in this paper.

So far the study has dealt with a single type of insurance assets. Uninvested assets, premium notes, and policy loans enter in without any definite investment plan as such. The assets now to be considered are those which have come in as a result of some definite action on the part of the investment managers.

¹T.B. Macauley, Transactions of the Actuarial Society, Vol. VIII, p. 29.

²The figures for premium notes and policy loans have been combined for each period. The combined figures since 1900 may be considered as representing policy loans almost entirely since the amount of premium notes since that date have been negligible.

E. Mortgage Loans.

1. Total Mortgage Loans Before 1906.

Mortgage loans constituted over one-half of the total admitted assets of the companies in 1860. This is attributed partly to the large requirements incident to the opening up of the western territories and partly to the limited field of investment then existing. Ten years later witnessed a considerable change. In 1870 the companies held mortgages equal to 44.4 per cent of total assets. This represented a decrease in ratios of 14 points. The cause of this sudden break was the abnormal condition arising out of the Civil War period. The rapid depreciation of currency made the purchase of government bonds exceedingly profitable and, as a consequence, funds were diverted from mortgages to government bonds. The gradual removal of the premium on gold, however, caused government bonds to lose their attractiveness. The period of 1870 to 1880 saw, however, no relative increase in mortgages. The depression of this period pricked the bubbles in real estate values and the ensuing foreclosures which netted losses almost in every case contributed largely to the failure of many companies. All this was sufficient to make mortgages unpopular at least for the time. The downward trend of the ratios commencing in the '90's due both to earlier foreclosures and the increasing popularity of corporate securities, was continuous until about 1906.

2. Total Mortgage Loans After 1906.

The trend of total mortgages since 1906 was continuously upward until 1928 with the exception of 1918 when the ratio was two points lower than in 1915. This decline may be attributed to the heavy purchases of government bonds which tended for the time being to displace other forms of investment. Since 1928 the trend has been distinctly downward; this in good part is a resultant of the trend in farm mortgages.

3. Farm Mortgages.

Because official reports did not separate farm mortgages from other real estate mortgages before 1918, these data are indicated in the tables for the first time in 1921. Until 1924 farm mortgages were held in amounts roughly equal to other real estate loans, the two together representing approximately one-third of the entire assets of the group. The trend was distinctly upward from 1921 to 1924, but since then farm mortgages have steadily declined in importance. The depressed condition of agriculture since the war is clearly reflected in this situation. In certain respects the period is comparable to that of the last decade of the past century when foreclosures and general deflation disrupted the farm loan market.

4. Other Real Estate Mortgages.

Real estate loans other than farm mortgages have steadily increased since the war. In 1930, however, a slight relative decrease is noted, with a more decided decrease taking place in 1931 which gives effect undoubtedly to the general break in the real estate market. The period from 1924 to 1927, which was characterized by a heavy building boom, saw a rapid increase in other real estate mortgages; incidently this presents quite a striking contrast to the relative decline in farm mortgages for the same period.

F. Real Estate.

As was noted in the review of state insurance laws, the holding of real estate is limited. As a general rule real estate comes in either as a result of foreclosures or for other purposes necessary to the conduct of the business, such as office construction. Following the panic of 1873 many defaults were experienced in mortgage loans and many foreclosures were necessary. The results appear in the ratios for the years of that period. In addition to this, beginning as far back as 1860 many corporations entered upon elaborate construction projects, whether they could afford it or not. Nearly every company with some aspirations for publicity put up a pretentious office building. The difficulties of the '70's brought home to many the error of such a policy. As Zartman aptly puts it, "In a number of cases these magnificent buildings stand out, not as monuments of strength, but rather as tombstones to departed companies."¹

The decided decline of relative holdings since 1903 is indicated by a drop in the ratios from 7.17 per cent to 1.5 per cent in 1925. Since 1925, however, an upward tendency is noted which undoubtedly suggests increased foreclosures arising out of the sustained depression in the field of agriculture.

G. Railroad Bonds.

Since 1890 railroad bonds have constituted a relatively large part of the aggregate investment portfolios of the companies. Prior to that date, railroad securities were avoided for the reason that the industry which they represented was largely in the experimental stage. As soon, however, as it became stabilized, its securities became valuable and were immediately acquired by most of the companies. By 1890 railroad bonds represented 21.2

¹Op. Cit., p.33.

per cent of all assets held, greatly in contrast to the situation at the close of 1880 when the corresponding ratio was only 4.7 per cent. The following fifteen years saw a rapid increase in the holdings of railroad bonds.

Since 1906, however, when the ratio of investments of rails to total assets was 34.79 per cent, a continuous decline in relative holdings has occurred. At the present time (1931) railroad bonds represent 16.48 per cent of the total admitted assets, the lowest ratio since 1890. As is indicated in Table IV investments in railroad bonds have had the slowest absolute growth of any type of investment indicated since 1909 to over twelve times what they were in 1909, rails little more than doubled during the same period. In 1921 there was an actual decrease in the absolute amount held, as compared with 1918, of more than \$16,000,000.

Aside from the physical limitations imposed by railroad development the uncertainty enveloping the industry because of social control has, undoubtedly been an important factor restraining an inflow of insurance capital.

H. Public Utility Bonds.

Under this heading are included securities of electric light and power, gas, and electric rail companies. Whereas investments in steam railroads have failed to keep pace with the growth of total investments, public utilities as a class not only exceeded this growth by more than two times but have led by a considerable margin all of the major investment groups. This signal growth is co-extensive with the recent expansion of the public utility industry. Electric railways present the only exception. Prior to the war, public utility investments of life companies represented primarily issues of electric rails, which may largely account for the general downward trend of the ratios that is indicated for this period. After the war, with the large development in the electrical field, such as in heat, light, and power, insurance companies rapidly acquired holdings in utilities other than rails. This had the effect of offsetting by a considerable margin the diminishing importance of the latter.

The following data¹ suggest the relative trend of three classes of utilities as well as showing the close correlation between the changing status of the industries and the tendencies exhibited by insurance investments.

¹
Moody's Manual Public Utilities, 1931.

TABLE V

(000 omitted)

Year	Electric Light & Power Companies (Value of Plant and Equipment)	Telephone and Telegraph (Value of Plant and Equipment)	Electric Rails Capitalization
1907	\$1,096,913	\$ 794,096	\$3,774,772
1912	2,175,678	1,081,433	4,708,568
1917	3,060,392	1,414,698	5,532,223
1922	4,465,015	2,129,773	5,446,794
1927	9,297,458	3,475,201	5,474,326

The trend of public utility investments is of particular interest in view of the tendency discerned in the holdings of steam railway bonds. One may wonder if the rapidly increasing resources of the companies may not flow into the public utility field to the same extent as they once did in the railroads. The fact that the utilities now present a picture quite comparable to that of the rails during the early years of the century suggests such a possibility.

I. Miscellaneous Bonds.

Bonds of manufacturing corporations make up the greater portion of the investments falling in this classification. Insurance companies have never been large buyers of this type of security. Their speculative character has caused them to be ranked with common stocks and therefore they have been considered both from the standpoint of law, as well as from that of the investment authorities, generally unsuitable. The fact that practically throughout the whole period embraced by this study less than 1 per cent of the total assets have been industrial bonds, is indicative of their unpopularity. It will be noted, however, that a distinct increase in their relative position occurred from 1926 to and including 1931. Although they represent at present only 1.71 per cent of total assets the fact of this current increase strongly suggests the possible future importance of this type of investment.

J. United States Bonds.

That insurance companies responded liberally to the demands of the government during the war period is evidenced by their large holdings of government bonds at that time. The only other period when this particular security was of an investment importance was during the Civil War and the twenty years following.

Some earlier notice has been given to this fact.¹ The premium on gold then obtaining caused the net return on bonds to mount to such an extent as to make them the most desirable type of investment. With the return to a stabilized currency system an automatic decrease in the yield of government bonds ensued. The disposal of the once profitable securities is indicated by the small ratio of .9 per cent of total assets existing in 1890.

The more recent war period (1915-1918) witnessed an unusual increase. Since 1921, however, every year with the exception of 1931 has seen a relative decrease in the total amount held, a situation entirely in keeping with earnings requirements of an insurance company. The fact, however, that government bonds furnish a most liquid form of investment is recognized and on this account most companies hold this type of security for emergency purposes. The marked increase registered for 1931 may be attributed to the break-down of the regular investment outlets and the crying need for maintaining liquidity in the face of large policy loans and surrenders.

K. State, County, and Municipal Bonds.

Bonds of political subdivisions occupy a relatively small part of the investment portfolios of the companies. In 1931 they represented 3.58 per cent of total assets. The only time when these bonds represented a fairly large part of the total investments was the period from 1870 to 1880, which was marked by extensive internal improvements. Repudiation of debts occurred frequently thereafter which is reflected in the ratios from 1890 to 1900. Two distinct trends since 1921 are noticeable. As is indicated in Table II, state, county, and municipal bonds decreased relatively until 1927. Since 1927, however, these bonds have indicated a consistent tendency to increase.

The growing demand for public improvements which has been felt in more recent years has resulted in large offerings in which insurance companies have participated to an increasing extent. The generally low return realized on this type of security places it in much the same class as United States bonds. Tax-exempt features attached to most issues are certainly of no particular inducement to an insurance company, much as they may be to certain private investors. Like United States bonds, however, they furnish a back-log of liquidity which one may assume to be the chief justification for their purchase. The additional fact that they readily meet the deposit requirements imposed by certain states accounts

¹See p. 22.

to some extent for their being in the portfolios of most companies.¹

L. Foreign Government, State, and Municipal Bonds.

The small amount of foreign public bonds held is evidenced by the low ratio in 1931 of 2.82 per cent, the greater portion of which consisted of Canadian securities. As was noted in the review of the various state laws, foreign bonds fall into the class not so generally permitted to life companies as investments. In those states where they are allowed, limitations existed, as a rule, as to the maximum amount that could be held. Since most foreign countries require that alien companies which wish to transact business within their borders make a deposit in domestic securities, foreign bonds will of necessity be held to some extent. That such investments have been made largely for the purpose of qualifying for foreign business seems reasonable.

M. Corporation Stock.

The issue concerning the investment in common stocks by life insurance companies has received more than the usual amount of attention during the past few years. The growing "stock-mindedness" of the public combined with the "new era" doctrine advanced prior to the market crash of 1929 tended to raise anew the question as to whether or not insurance companies might not safely direct a larger portion of their resources into this type of security. The matter appeared to have been settled decisively by the Armstrong committee in 1906. To quote:

"The holding of stocks by life insurance companies is fundamentally objectionable, as the corporation instead of holding a secured obligation, acquires a proprietary interest in another business, with rights subject to all indebtedness which may be created in the conduct of it and often direct liabilities as stockholders. This interest must be nourished and supported. Instead of being a creditor with adequate security, to which upon default the corporation must resort, it assumes the responsibilities of proprietorship and must contribute from the accumulations provided by the policyholders in order to sustain the enterprise. If the stockholders constitute a small minority the investment is at the mercy of administrators

¹Frequently state laws require deposits, usually in specified securities, of all foreign companies entering the state to transact business. Government securities ordinarily meet such requirements.

chosen by a majority of the stockholders. If the stock interest be a large one it is frequently found advisable to increase it until a substantial control is effected and the insurance corporation is not only engaged in a different enterprise, but directly undertakes its management. Such relations afford ready opportunities to conceal the irregular transactions and hide the malversation of funds.¹

At the time of the New York investigation the stock holdings represented 4.7 per cent of total assets. The passage of a law by the New York legislature in 1906 which prohibited further stock purchases as well as requiring that all stocks then held be liquidated within a specified time² is reflected by the drop in the ratios from 5.5 per cent in 1903 to 1.75 per cent in 1912.

As was shown earlier, most states do permit stock purchases in one form or another, but the restrictions are usually so extensive as to make the privilege more nominal than real. Such stocks therefore, as do pass muster are virtually in a class with high grade bonds and devoid of the speculative advantages for which as a class they may have been desired.

The passage of the Wales-Merriam Act in 1928, permitting New York companies to purchase guaranteed and preferred stocks, accounts for the increase of ratios from .40 per cent in 1927 to 3.04 per cent in 1930. The New York law does not, however, allow common stock investments. That the present stock holdings are made up largely of guaranteed and preferred equities is indicated by the following data compiled by the Association of Life Insurance Presidents.

TABLE VI

STOCK HOLDINGS OF 52 UNITED STATES COMPANIES

Year	Common Stock	Guaranteed and Preferred	Total
1906	\$115,347,000	\$ 19,437,000	\$132,784,000
1919	65,388,000	17,067,000	82,455,000
1929	86,847,000	237,324,000	324,171,000
1930	99,013,000	351,385,000	450,398,000
Sept.30			
1931	105,454,000	410,794,000	516,248,000

¹ Report of the Joint Committee of the Senate of Assembly of the State of New York, 1906, p. 279.

² Former Sec. 100 as amended by L. 1908, Chap. 9.

The whole question of the suitability of stocks for life company investment is one that raises numerous issues for which only a setting is offered here. That stocks have assumed greater importance in insurance company investments in recent years is apparent, although the definite drop in the ratio for 1931 as compared with 1930 does not on the face of things look promising for this type of security.

N. Distribution of Assets of Fifteen Middle-West Companies.

Since there are 315 life insurance companies in addition to the 27 which have been considered so far, it may not be amiss at this point to show something of the character of the investments of other companies. For this purpose, 15 middle-west companies have been selected whose total assets in 1931 ranged from twelve to seventy-six million dollars. The large majority of the American companies have resources of less than ten millions.

The ratios shown in the second column of the following table have been computed in a manner similar to that used in finding the ratios shown in the first column for the 27 companies, the latter being taken from Table III.

TABLE VII

PERCENTAGE DISTRIBUTION OF TOTAL ADMITTED ASSETS
OF 2 GROUPS OF COMPANIES, 1931

	27 Companies ¹	15 Companies ²
Mortgages	36.69%	44.52%
Bonds	35.60	15.08
Stocks	2.61	2.62
Total Bonds & Stocks	38.21	17.70
Collateral Loans	.01	1.06
Real Estate	2.49	9.27
Policy Loans	16.00	21.15
Cash	.77	1.48
Other Assets	5.83	4.82
	100.00	100.00

¹Controlled 85.4 per cent of total admitted assets of all companies in 1931.

²Controlled 2.5 per cent of total admitted assets of all companies in 1931. See Appendix II-A for list of companies employed.

From the data above it appears quite obvious that the smaller companies are primarily in the mortgage investment field. It is also to be noted that the real estate holdings are proportionately larger for those same companies. This gives weight to the fact that their mortgage investments are correspondingly larger. The mortgage influence may also account for their higher ratio of cash. The normal time required to place funds in mortgages is of longer duration than when the funds are used to purchase bonds. During the interim, therefore, cash will be held pending eventual placement. The fact that the smaller companies show a higher ratio of policy loans is largely due to the group and industrial business transacted by some of the companies included in the larger group. This tends to lower the total average and prevents the ratio from being entirely comparable.

O. Distribution of Assets of Individual Companies.

That the investment portfolios of the individual companies show considerable variations from the group set-up as presented in preceding sections is clearly revealed in Table VIII. The data there presented are for twenty companies which belong to the original group of twenty-seven and show the composition of the total assets of each of those companies as of December 31, 1931.

Differences are particularly marked with respect to the holdings of mortgages. Although each of the companies holds mortgages, no two companies have the same relative amounts nor do the same proportions obtain for loans on farms as for city property.

Only eight of the companies show more than 18 per cent of their assets in farm mortgages while the remaining twelve have a negligible amount of such loans or none at all. Three of the former, the Union Central, the Equitable of Iowa, and the Bankers Life of Iowa are essentially "farm mortgage companies" having invested over 40 per cent of their resources in loans on farm property. The fact that these three organizations are located in the center of rich agricultural communities suggests one of the reasons why this has come about. Legal control may also be an influencing factor. As was earlier noted, the state of Ohio prohibits her companies from investing their funds in corporate securities. The state of Iowa has only recently recognized by law such investments as legal for her companies.¹ In view of this limitation of the investment field it can be expected that mortgages would be predominant. One will note that over 50 per cent of the total assets of these companies are represented by this

¹Chapter V, p. 58.

type of investment.

Other real estate mortgages are held in varying amounts by all companies. The Guardian Life has apparently found such mortgages much to its liking since approximately 58 per cent of its total admitted assets consist of this type of security alone.

The Massachusetts Mutual holds no farm mortgages but over 44 per cent of its assets are in other real estate loans. Such decided preferences are difficult to account for. No doubt company tradition, and the predilections of executives have played an important part in establishing investment practice.

As to the policy of diversifying between farm and other real estate loans only five companies appear to attempt a somewhat equal division of funds between the two. The Northwestern Mutual closely approaches this situation having farm and other mortgages that represent 22.15 and 19.67 per cent respectively of its total assets. Aside from these companies concentration in either one or the other type of security seems to be the rule.

Railroad bonds are held by all except three of the companies. The Mutual Life of New York holds over 31 per cent of its assets in rails, leading all the others by a wide margin. In view of the tendency noted for rails to decline this investment position of the Mutual Life of New York is quite difficult to understand.

Public utility bonds are held by nearly all of the companies but occupy varying portions of the investment portfolios. The Columbian National, the New England Mutual, the Connecticut Mutual, the Phoenix Mutual, and the Massachusetts Mutual, are particularly favorable to the utilities, and with the exception of the New England Mutual, hold more of this type of security than of railroad bonds. The Columbian National has nearly one-fourth of its assets in public utility bonds; this is in decided contrast to the 10 per cent average of all twenty-seven companies.

United States government bonds and bonds of political subdivisions are important in the case of three companies. These are the Equitable of Iowa, the Bankers Life of Iowa, and the National Life of Vermont. It is difficult to justify a company policy which maintains one-fifth of its assets in low yield government securities, as does the Bankers Life of Iowa. The association of the state of Iowa, with two of the three companies mentioned above, recalls again the prohibition of corporate securities which was in effect in that state until 1927.

The Union Central holds real estate out of all proportion to the other companies. A ratio of over 12 per cent indicates heavy mortgage foreclosures. The large proportion of farm mortgages which this organization holds is significant in this connection.

[illegible]

TABLE VIII -- Continued

Fidelity	Home	Mutual Benefit	State	Provi- dent	Phoenix	N.Y. Life	Conn. Mutual	Mutual N.Y.	New Eng.	Colum- bian National
3.86	4.12	4.75	6.06	5.16	5.10	3.94	7.05	3.69	3.71	6.02
4.35	1.91	3.18	3.23	2.88	5.28	1.97	2.55	.92	1.51	3.31
21.51	25.35	24.70	21.69	19.23	17.22	19.87	18.35	18.13	22.95	23.82
-	-	-	2.02	.00	3.71	2.15	3.57	1.50	.58	3.28
3.75	1.40	2.06	7.93	3.08	1.65	8.52	4.32	5.30	7.79	9.92
1.15	3.42	1.13	1.25	.55	3.91	4.19	4.24	1.97	1.35	3.54
1.11	1.09	.71	.30	.57	.79	1.03	.90	1.26	.69	.56
11.93	6.12	7.91	8.36	6.55	13.64	8.15	16.31	7.94	17.24	22.59
12.70	18.12	16.93	11.68	25.06	11.20	20.16	12.72	31.28	18.35	9.18
37.99	38.47	13.16	37.48	33.83	18.45	28.66	11.01	28.01	25.83	15.22
1.65	-	25.47	-	3.09	19.05	1.36	18.98	-	-	2.56
100	100	100	100	100	100	100	100	100	100	100

¹Source- New York State Life Insurance Reports, 1932.

Only two companies have more than 4 per cent but less than 5 per cent of their assets in stocks. Five companies hold no stock at all. One may conclude then that as far as the major life companies are concerned corporation stock does not at present represent an investment medium of any significance.

Policy loans run generally uniform for all twenty companies although here again the Union Central ratio exceeds somewhat that of the others. This is perhaps significant in view of its large real estate investment.

P. Summary.

In summarizing this survey of the character of insurance investments the following points are to be noted:

- (1) Bonds and mortgages, which are almost of equal investment importance as a class, account approximately for three-fourths of the total admitted assets of the group of companies examined.
- (2) Other real estate mortgage holdings are now more than three times that of farm mortgages and approximately equal to the total corporate bond holdings.
- (3) The relative holdings of farm mortgages have declined since 1924 and in absolute amounts since 1927, whereas those of city mortgages, which were about equal to farm loans in 1923 have increased continuously up to 1929. In 1930 there was a slight relative decline in city loans which continued at an accelerate rate throughout 1931.
- (4) Railroad bonds have shown a relative decrease since 1906, but have never declined absolutely save for the period from 1918 to and including 1921.
- (5) Public utility bonds have increased relatively since 1921 and now represent an amount more than one-half of the total investment in railroad bonds and slightly above that of farm mortgages.
- (6) Government bonds account for over 8 per cent of the total admitted assets of this percentage approximately five-eighths represent United States public bonds. The trend of total government issues was clearly downward until 1930.
- (7) Industrial bonds have never been of any great investment significance, although a marked upward trend has occurred since 1927.
- (8) Stocks represent approximately 2.61 per cent of total assets having increased over eight times since 1927. This increase is largely attributed to the Wales-Merriam act which permitted New York companies to invest in guaranteed and preferred stocks. Approximately four-fifths of total holdings of stock

are made up of guaranteed and preferred equities.

- (9) Premium notes and policy loans reflect business fluctuations closely. This is made most apparent when the rates of increase or decrease of the ratios of the premium notes and policy loans to the legal reserves are charted. The present business depression has occasioned the highest ratio of policy loans in the history of the companies.
- (10) Relative holdings of real estate have increased steadily since 1925 and at present are slightly over 2 per cent of total assets, the highest ratio since 1925.
- (11) When the aggregate investment portfolios of the 27 companies are compared with the aggregate portfolios of 15 midwest companies, one notes certain differences in the relative holdings of securities. The latter group was shown to hold a larger investment in real estate mortgages and real estate relative to its aggregate assets than was true of the 27 larger companies. On the other hand, the larger group held proportionately greater amounts of bonds.
- (12) Considerable variation exists as between individual companies as to their relative investment holdings by classes. Most differences occur in the real estate mortgage class, although distinct differences also obtain with respect to relative holdings of the various types of bond holdings.

CHAPTER IV

THE GEOGRAPHICAL DISTRIBUTION OF INVESTMENTS

A. Purpose of Chapter.

The previous chapter has indicated the classes of securities held by life insurance companies as well as the amount of their total resources which have been allotted to each class. The examination of investment policy will be continued here but directed from the preceding inquiry of security class-diversification to that of the geographical distribution of investments. Much the same procedure will be followed as in the preceding study. The manner in which investment policy has caused the total investment as well as certain classes to be distributed geographically will be shown for a number of companies taken in the aggregate and covering a period of time sufficient to indicate general trends.

B. Sources of Data

Due to the fact that the state insurance reports do not classify investments, other than real estate and real estate mortgages, material for this part of the study has been obtained from the annual reports of the Association of Life Insurance Presidents. The data are for companies whose assets in the aggregate represent over 90 per cent of the total assets of all American companies. They are therefore sufficiently related to those compiled for the preceding chapters to allow the study to continue without any appreciable modification.

C. Definition of Geographical Divisions.

To shorten the tables and show general results, the country has been divided into geographical divisions which correspond with those used by the United States Bureau of the Census; these are:

New England:	Maine	New Hampshire	Vermont
	Massachusetts	Rhode Island	Connecticut
Middle Atlantic:	New York	New Jersey	Pennsylvania
East North Central:	Ohio	Indiana	Illinois
	Michigan	Wisconsin	
West North Central:	Minnesota	Iowa	Missouri
	North Dakota	Nebraska	South Dakota
	Kansas		

South Atlantic:	Delaware	Maryland	District of Columbia
	Virginia	West Virginia	North Carolina
	Florida	Georgia	South Carolina
East South Central:	Kentucky	Tennessee	Alabama
	Mississippi		
West South Central:	Arkansas	Louisiana	Oklahoma
	Texas		
Mountain:	Montana	Idaho	Wyoming
	Colorado	New Mexico	Arizona
	Utah	Nevada	
Pacific:	Washington	Oregon	California

D. Geographical Distribution of Farm Mortgages.

As shown by Table IX, the largest relative amount of farm loans has been made in the seven states forming the West North Central division. In 1931 investments in this division represented 58.9 per cent of the total farm loans. Next in order was the East North Central group which had loans amounting to 18.9 per cent of the total. The agricultural importance of these two territories account in the main for their share of over three fourths of the total farm loans made.

The downward trend since 1923 in the ratios for the West North Central division, as indicated in Table IX, suggests that this field for farm loans is decreasing in importance. On the other hand the East North Central division presents an opposite tendency. Although the former trend is not considerable, the range of the ratios downward being from 61.1 to 58.9 per cent; the trend of the latter is quite pronounced. Then too, the figures showing the per cent of increase in absolute amounts of farm loans for the two territories are significant. Whereas farm loans increased only 6.4 per cent in the West North Central division for the nine year period, similar investments increased 38.3 per cent in the East North Central division over the same period of time.

Several reasons may be advanced for this. It may be held that a ratio of nearly 60 per cent of total farm loans represents a concentration in one agricultural region that is being recognized as too great for safety. It is well known that many farms of the northwest have been confined largely to the growing of cereals with a minimum amount of dairy and cattle production. Although all agricultural activities have been depressed in recent years, this is particularly true of small grain farming. Agriculture in the East North Central states is, on the other hand, considerably more diversified and would therefore appear to offer greater security for loans. That insurance companies are modifying their

TABLE IX
RATIO OF FARM MORTGAGES IN DIVISION
TO TOTAL INVESTMENTS IN CLASS 1923-1931¹

Division	1923	1924	1925	1926	1927	1928	1929	1930	1931	% of Increase 1923-1931
	%	%	%	%	%	%	%	%	%	
New										
England	.0	.0	.0	.0	.0	.0	.0	.0	.0	-
Middle										
Atlantic	.1	.0	.0	.0	.0	.0	.0	.0	.0	-
East North										
Central	15.1	16.0	16.8	17.3	17.5	17.7	18.1	18.7	18.9	38.3
West North										
Central	61.1	61.0	60.9	60.6	60.5	60.3	60.0	59.2	58.9	6.4
South										
Atlantic	4.1	3.7	3.3	3.1	2.9	2.8	2.7	2.6	2.5	-32.3
East South										
Central	5.0	5.1	5.1	5.1	4.9	4.9	4.8	4.7	4.6	2.6
West South										
Central	11.2	10.6	10.4	10.4	10.4	10.5	10.4	10.5	10.5	3.4
Mountain	1.5	1.5	1.3	1.2	1.3	1.3	1.3	1.3	1.3	-6.4
Pacific	1.9	2.1	2.2	2.3	2.5	2.5	2.7	2.8	2.9	-62.9
Territories & Possessions	.0	.0	.0	.0	.0	.0	.0	.0	.0	-
Foreign										
Countries	.0	.0	.0	.0	.0	.0	.0	.2	.4	-
Total	100	100	100	100	100	100	100	100	100	10.3

¹Source- Proceedings of the Convention of the Association of Life Insurance Presidents, 1924 and 1932.

policies in accord with the changing trends of farm prosperity seems clear. This of course was particularly noted in Chapter III where it was shown how farm mortgages as a class had been reduced absolutely during the past three years. It would seem that a policy of allocating loans on the basis of type of farm activity carried on, which becomes essentially one of geographical distribution, is a further safeguard being employed.

The supply and demand situation is an additional factor that may account for the trends noted above. Funded debt of the West North Central division decreased considerably from 1925 to 1930, while that of the East North Central division increased.¹ An increased funded debt goes hand-in-hand with increased land values, the opposite is equally true. The profitability of farming lies at the root of most land values and the demand for funds. The farms of the northwest have certainly had little occasion to expand operations and hence to borrow money. It is also reasonable to assume that few land transfers which account in good part for farm loans have been effected.² The usual occasion for a transfer is a profit to be realized, and no such profit would have been forthcoming. Thus the demand for funds has been cut off and the investment policy of life insurance companies, whether motivated by the necessity invoked by a decreased demand for loans or by the obvious hazards of lending under the circumstances, is shaped to conform to the facts as they are revealed.

Although farm loans made in the Pacific division are of small importance, the trend which they reveal seems significant. In view of the heavy concentration of loans in the one division noted above with a likelihood of some decrease there in the future, for reasons which have been pointed out, it does not seem unlikely that the Pacific region will grow in importance. The ratio trend of investments in that region is upward for one thing. Then too, the gross income of Pacific farms in 1930 was approximately equal to that realized in the South Central division whose share of total farm loans was 10.5 per cent or nearly four times the amount loaned on Pacific farms.

It is apparent that life companies have not favored loans in the cotton belt excepting perhaps in the regions embraced by Arkansas, Texas, Louisiana, and Oklahoma. The South Atlantic states have received decreasing relative amounts since 1923, representing an absolute decrease of 32.3 per cent for the nine year period. The Mountain states have likewise received small financial

¹Report of the Comptroller of Currency, 1930.

²David L. Wickens, Farm Mortgage Credit, p. 19.

assistance from the life companies. The reasons seem obvious. High as the interest return may be on such loans, the risk of non-payment of principal and interest has more than off-set the advantageous contracts that might have been available. It does not appear likely that the future will see any considerable expansion of farm loans in this direction.

E. Geographical Distribution of Other Real Estate Mortgages.

Other real estate mortgages here include loans made on private dwellings, apartments, and smaller office and business buildings. It will be recalled that loans of this type have in recent years greatly outrun farm loans so that at present they are approximately double the latter in total amount. Their geographical distribution (see Table X) presents, for the most part a contrast to that of farm loans. The Middle Atlantic states, which were of small importance as farm loan areas, draw over 38 per cent of the total loans made on village and city properties. The West North Central division, in which the larger percentage of farm loans were made, accounts for only 6.5 per cent of the total village and city mortgages. The East North Central states, however, occupy a relative position much similar to that held with respect to farm mortgages.

It is quite evident that the East North Central division is gradually gaining in investment importance, apparently at the expense of the regions to the east. The states of New York, New Jersey, and Pennsylvania increased their drawings of urban loans 159 per cent over the nine year period from 1923 to 1931, which was at a rate considerably below that experienced by the East North Central states. Similarly the relative holdings of the former group decreased for the same period from 48.8 to 36.8 per cent, while the latter witnessed a trend of ratios of 15.9 per cent in 1923 to 23.4 per cent in 1931. Such a tendency is of course in line with the trend of urbanization, which has gradually moved westward. As newer communities are developed and property values become more stabilized, insurance companies appear to adjust their investment policies to accord with such developments.

The Pacific region again presents interesting possibilities. As was noted in Table IX, the flow of farm loans into this territory has increased at a more rapid rate than in other territories. The rate of flow of city loans is comparable in this respect. In 1931 this section had received 8.7 per cent of the total city loans made, a gain of 429 per cent for the nine year period.

City mortgages have also gained in relative importance in two other regions, the East South Central and West South Central.

TABLE X

RATIO OF OTHER REAL ESTATE MORTGAGES IN DIVISION
TO TOTAL INVESTMENTS IN CLASS 1923-1931¹

Division	1923	1924	1925	1926	1927	1928	1929	1930	1931	% of Increase 1923-1931
	%	%	%	%	%	%	%	%	%	
New										
England	2.7	2.6	2.6	2.7	2.8	2.8	2.7	2.8	2.8	228.4
Middle										
Atlantic	46.8	43.6	41.9	40.9	39.9	39.6	39.1	38.9	38.8	159.0
East North										
Central	15.9	17.3	18.7	19.6	20.9	21.7	22.4	22.9	23.4	358.3
West North										
Central	10.8	10.9	10.1	9.3	8.4	7.7	7.1	6.8	6.5	87.9
South										
Atlantic	10.0	10.4	10.2	10.4	10.4	9.9	9.7	9.5	9.3	187.9
East South										
Central	3.3	3.7	4.1	4.2	4.3	4.3	4.4	4.2	4.1	4.2
West South										
Central	2.7	2.9	3.4	3.4	3.4	3.6	3.7	3.7	3.8	349.1
Mountain	1.3	1.3	1.2	1.1	1.1	1.0	1.0	1.0	1.0	146.9
Pacific	5.2	5.9	6.4	7.1	7.5	8.1	8.5	8.6	8.7	429.1
Territories & Possessions	.0	.0	.0	.0	.0	.0	.0	.0	.0	-
Foreign										
Countries	1.3	1.4	1.4	1.3	1.3	1.3	1.4	1.6	1.6	286.0
Total	100	100	100	100	100	100	100	100	100	212.5

¹Source- Proceedings of the Convention of the Association
of Life Insurance Presidents, 1924 and 1932.

Although the relative amount of such loans represented in 1931 only 4.1 and 3.8 per cent respectively of the total for the country as a whole, the rates of increase were 286 and 349 per cent respectively of the total for the nine year period. This is in contrast to the farm loan tendencies in these territories which registered relative decreases for the same period. Presumably city development offers here a greater assurance of stability, which is reflected in a stronger response to the demand for such loans.

F. Geographical Distribution of Total Investments.

The distribution of total investments as indicated in Table XI, shows the complete picture of how investment policy has directed funds into various localities. That 58 per cent of the total resources of insurance companies in 1931 were invested in fifteen states in the Middle Atlantic, East North Central, and the West North Central divisions points to the facts that, localities having the greatest commercial or industrial development have been favored.

In view of the decided geographic preference which insurance companies exhibit in their investments, the opinion has often been held that they were causing a depletion of the wealth of certain communities by withdrawing therefrom the premiums collected. As a consequence, one finds that at one time or another, states have given consideration to the question of whether or not an effort should be made to compel the investment of life insurance reserves within the states from which they had been derived. In only one state, however, has a compulsory law directed to this end been enacted.¹ Other states that contemplated similar action discovered upon investigation that foreign companies had already made the required investment, hence there appeared to be no need for legislation even if it were desirable.

The tabulation included in Table XII showing the ratio of investments to reserves in each division gives no support to the contention that reserves are withdrawn from localities to be used by the "Eastern Interests." As is noted, reserves have exceeded investments in all divisions with the exception of the territories included in the New England and Middle Atlantic states. This lends support to the fact that eastern reserves are being withdrawn to supply the capital requirements of other regions. The following data for 1931 show the amounts that have been added to total insurance resources by the policyholders located in the various divisions.

¹Texas R.S. Act. 4788.

TABLE XI

RATIO OF INVESTMENTS IN EACH DIVISION
TO TOTAL INVESTMENTS 1923-1931¹

Division	1923	1924	1925	1926	1927	1928	1929	1930	1931	% of Increase 1923-1931
	%	%	%	%	%	%	%	%	%	
New										
England	3.9	3.8	3.7	3.7	3.7	3.7	3.7	3.8	3.9	13.69
Middle										
Atlantic	21.7	21.6	22.2	22.6	22.9	23.3	23.7	23.8	24.2	134.2
East North										
Central	17.2	17.8	18.1	18.6	19.0	19.1	19.3	19.9	20.1	145.9
West North										
Central	19.9	19.8	19.0	18.0	17.1	15.9	14.9	14.2	13.7	44.5
South										
Atlantic	8.9	9.1	9.1	9.2	9.1	9.0	8.9	8.7	8.5	100.2
East South										
Central	5.4	5.4	5.5	5.4	5.3	5.2	5.2	5.0	4.9	89.2
West South										
Central	6.0	5.9	5.9	5.7	5.7	5.7	5.6	5.7	5.7	98.3
Mountains	3.4	3.3	3.1	2.9	2.9	2.7	2.6	2.5	2.5	54.3
Pacific	4.9	5.3	5.5	5.8	6.1	6.4	6.6	6.7	6.7	183.9
Territories & Possessions	.0	.0	.0	.0	.0	.0	.0	.0	.0	-
Canada	3.3	3.3	3.3	3.3	3.4	3.4	3.6	3.8	3.9	144.4
Other For- eign Gov't	1.1	.7	.5	.4	.4	.4	.4	.4	.4	-17.6
Misc.	4.3	4.0	4.1	4.4	4.4	5.2	5.5	5.5	5.5	-
Total	100	100	100	100	100	100	100	100	100	109.7

¹Source- Proceedings of the Convention of the Association of Life Insurance Presidents, 1924 and 1932.

TABLE XII

RATIO OF INVESTMENTS IN EACH DIVISION
TO RESERVES IN EACH DIVISION 1923-1931¹

Division	1923	1924	1925	1926	1927	1928	1929	1930	1931	% of Increase 1923-1931
	%	%	%	%	%	%	%	%	%	
New										
England	47.6	46.7	46.2	46.1	46.2	46.3	47.0	48.0	49.3	106.9
Middle										
Atlantic	80.4	78.3	79.6	79.5	80.6	79.4	79.1	78.4	79.0	138.6
East North										
Central	97.7	100.2	102.1	104.3	106.3	104.2	103.9	105.9	108.1	122.1
West North										
Central	242.1	250.6	243.9	236.8	228.0	206.8	196.0	185.3	177.5	97.1
South										
Atlantic	125.3	129.7	130.9	134.1	136.4	133.8	135.3	132.8	129.4	93.8
East South										
Central	154.4	157.9	162.2	164.2	166.9	162.5	163.8	161.9	161.6	80.7
West South										
Central	198.0	202.7	205.1	202.5	204.6	198.6	198.3	200.9	205.9	90.7
Mountains	191.1	194.8	190.1	184.9	183.5	172.7	161.5	156.6	153.5	92.1
Pacific	99.9	114.0	118.3	122.9	128.4	128.5	130.5	129.8	126.9	123.5
Territories										
& Possessions	18.5	18.5	26.4	27.2	27.4	25.8	30.5	32.4	33.1	77.5
Canada	188.8	190.5	184.9	184.6	188.6	184.7	192.5	194.9	201.5	128.9
Other For.										
Countries	87.3	92.7	82.8	82.8	92.4	126.7	141.1	170.1	167.2	-56.9
Total	100	100	100	100	100	100	100	100	100	160.9

¹Source- Proceedings of the Convention of the Association of Life Insurance Presidents, 1924 and 1932.

TABLE XIII

RESERVES BY DIVISION-1931¹

Division	Reserves	
New England	\$1,473,244,000	
Middle Atlantic	5,676,274,000	
East North Central	3,444,331,000	
West North Central	1,425,167,000	
South Atlantic	1,216,237,000	
East South Central	561,313,000	
West South Central	507,699,000	
Mountain	298,209,000	
Pacific	971,252,000	
Territories and Possessions	18,671,000	
Total United States		\$15,592,397,000
Canada		356,756,000
Other Foreign		46,134,000
Miscellaneous		69,550,000
Total		\$16,064,837,000

It will be observed that the policyholders of the New England and Middle Atlantic divisions contribute nearly one-half of the total reserves. The ratios of investments to reserves for these territories were in 1931, however, 49 and 79 per cent respectively. This would mean that only about three-fourths of the combined contributions of the policyholders of these localities were invested locally, the other fourth going to other regions.

The small relative amount of the total insurance investments placed in the five New England states is especially marked. In 1931 this represented only 3.8 per cent of the total investments of \$18,467,164,000 or \$701,752,232. At the same time the New England reserves amounted to \$1,473,244,000. In contrast, the West North Central states had received in 1931 13.7 per cent of the total investments or \$2,529,056,000. Their reserves on the other hand were much below this figure, or \$1,425,167,000.

Several reasons may be advanced in the way of an explanation for this seeming neglect of the New England division. The financial condition of this region may be pointed to as the underlying cause. Its citizens, taken as a whole, are lenders of money and not borrowers. This is evidenced by the large per capita life

¹Proceedings of the Convention of the Association of Life Insurance Presidents, 1932.

insurance reserves as well as the large accumulation in savings banks. The following data are illustrative:

TABLE XIV

	Per Capita Savings ¹ in all Banks-1931	Number of Mutual ² Savings Banks-1931
New England	\$593	381
Eastern States	402	197
Southern	48	
Mid West	156	17
Western	61	5

TABLE XV

	Per Capita Life Insurance Reserves-1931
New England	\$179
Middle Atlantic	213
East North Atlantic	134
West North Atlantic	106
South Atlantic	76
East South Central	56
West South Central	41
Mountain	70
Pacific	115

Mutual savings banks, it is observed, are predominant in the New England states. These are to a considerable extent restricted in their lending operations to the communities in which they are located. Local securities would therefore be sought after; this, combined with the general excess of capital available, would tend to drive interest rates down. This has likely been one of the principal factors that have deterred insurance companies from investing more funds in this region.

G. Summary.

Investment policy insofar as it has involved considerations of the geographical distribution of funds appears to have been guided greatly by the capital needs of communities. It is apparent

¹Report of Comptroller of Currency, 1932.

²Ibid.

that as regions advance in industrial development insurance funds are directed toward them in greater volume. The tendencies that have been noted for insurance investments to flow from eastern sections is an expression of this.

It seems also clear that investment policy is modified continuously to accord not only with changing capital needs of the different territories but by considerations of safety, if that factor can be properly separated. The tendency for farm loans to flow out of the more depressed agricultural areas to farm territories more prosperous, at least for the time being, indicates a positive regard for safety of investment.

The fact that reserves are exceeded by investments in all territories save the two eastern localities where capital is plentiful, suggests the fallacy of the assumption that insurance companies deplete the capital resources of a community. The likelihood of such a condition developing seems remote as long as communities progress or have not reached a stage of development where they become lenders rather than borrowers. In the event that a community retrogrades reserves will likely become greater than investments but this situation should give rise to no just complaint.

CHAPTER V

DIVERSIFICATION IN BOND INVESTMENTS

A. Purpose of Chapter.

In the foregoing chapters some detailed examination has been made of investment policy as it has concerned the distribution of investments by type of security and by geographical location. As was there noted, bonds and stocks combined amounted to \$6,580,668,000 in 1931, or 38.21 per cent of the total admitted assets of the twenty-seven companies studied. Of this amount, however, stocks accounted for only 6 per cent or \$456,157,000. The object of this chapter will be to consider certain policies of diversification as they apply particularly to bond holdings. The inquiry will be directed towards answering the following questions:

1. To what extent have the companies diversified as between individual borrowers? What are the average amounts loaned to individual corporations or borrowing units?
2. To what extent have insurance companies distributed their bond maturities? Does there appear to be a definite attempt to spread maturing dates evenly? What appears to be the policy with respect to "long term" and short term" securities? Does the evidence point to the generally accepted opinion that insurance companies in the main are investors in long term issues?
3. What is the policy of life companies in the matter of having readily marketable securities available?

For the purposes of this survey, only a few companies can be conveniently studied. The hundreds of issues representing the total bond holdings of the average sizeable company, which must be examined singly, prohibit any exhaustive analysis. It is believed, however, that such evidence as may be gained from the detailed study of the portfolios of several of the largest companies will be sufficiently representative to justify the general conclusions drawn.

B. Diversification of Debtors in Bond Investments.

To show the average amounts that companies have loaned to individual borrowers as well as to indicate something of their trends over a period of time seven of the larger companies have been selected for examination. Four are New York companies and

three are domiciled in Connecticut. The fact that the insurance departments of these two states submit in their annual reports complete bond and stock schedules accounts to some extent for this particular selection of companies.

The bond holdings were examined as of December 31, 1915, 1925, and 1930, and a separate study was made of railroad bonds, public utility bonds, and industrial bonds.

To determine whether there had been an increase or decrease in diversification of debtors the percentage increase or decrease in the average amount loaned to individual borrowing units was computed with the percentage increase or decrease in the total amounts of bond investments. Thus it will be seen that even if the average amount had increased as between two periods this alone is not so significant, for, as a matter of fact, such an increase is normal in most cases. It certainly could not be taken as evidence that there had been a decrease in diversification for if the total investments had increased more rapidly, diversification may be said to have increased over the period.

Some difficulty was encountered in defining individual borrowing units. How for example, should subsidiaries be treated? Should they be recognized as separate borrowing units or should they be included as a part of the controlling corporation constituting together one single borrower? Since the security issues of subsidiaries do in most instances, however, derive their principal value from the character of their direct liens it was deemed advisable to consider subsidiaries as separate borrowing agencies.

C. Diversification of Investments in Railroad Bonds.

In Table XVI tendencies toward either increased or decreased diversification in Railroad Bond investments are indicated for two periods, the first from 1915 to and including 1925, and the second from 1925 to and including 1930.

One will first note the wide variation as between companies in the rate of increase of railroad bonds over periods. The comparative records of the Metropolitan and the New York Life for the years 1915 and 1925 are illustrative. Whereas the former increased its holdings 197 per cent, the latter experienced an actual decrease of 13 per cent. Similarly, for the years 1925 and 1930, the Aetna increased its railroad securities 438 per cent, while the Equitable increased such holdings only 5 per cent. Considered from the standpoint of general trends in diversification, however, all companies with one exception for the first period and two for the second, agree in showing a greater degree of diversification than had obtained previously. This is witnessed by the fact that the rates of increase in average amounts loaned to individual

TABLE XVI

DIVERSIFICATION OF INVESTMENTS IN RAILROAD BONDS
OF 7 LIFE INSURANCE COMPANIES 1915-1925-1930¹

Company	Per cent Increase of Total R.R. Bonds 1915-1925	Per cent Increase in Aver- age Am't Loaned per Bor- rower. 1915-1925	Increased Diver- sifica- tion (+) Decreased Diver- sifica- tion (-) 1915-1925	Per cent Increase of Total R.R. Bonds 1925-1930	Per cent Increase in Aver- age Am't Loaned per Bor- rower. 1925-1930	Increased Diver- sifica- tion (+) Decreased Diver- sifica- tion (-) 1925-1930
Equi- table	2.0%	-58.0%	+	5.0%	13.0%	-
Mutual	17.0	15.0	+	8.0	2.0	+
New York	-13.0	5.0	-	10.0	.2	+
Metro- politan	197.0	97.0	+	61.0	42.0	+
Conne- cticut	3.0	-20.0	+	23.0	.3	+
Trav- elers	72.0	47.0	+	95.0	101.0	-
Aetna	4.0	- 1.0	+	438.0	202.0	+

corporations between periods was less than that of the increase in total amounts.

D. Diversification of Investments in Public Utility Bonds.

The general tendency for the average amount loaned to individual corporations to increase at a lower rate than is true for total loans is quite apparent in public utility investments as is indicated in Table XVII.

All companies diversified on an increased scale when the years 1925 and 1930 are considered. It is also noted that the disparity between the rate at which total loans have increased and that of the average amounts is much more marked than in the case of the railroads. This undoubtedly arises in large part from the

¹Source- N.Y. and Conn. State Life Insurance Reports.

TABLE XVII

DIVERSIFICATION OF INVESTMENTS IN PUBLIC UTILITY BONDS
OF 7 LIFE INSURANCE COMPANIES 1915-1925-1930¹

Company	Per cent Increase of Total Public Utility Bonds 1915-1925	Per cent Increase in Aver- age Am't Loaned Per Bor- rower. 1915-1925	Increased Diver- sifica- tion (+) Decreased Diver- sifica- tion (-) 1915-1925	Per cent Increase of Total Public Utility Bonds 1925-1930	Per cent Increase in Aver- age Am't Loaned per Bor- rower. 1925-1930	Increased Diver- sifica- tion (+) Decreased Diver- sifica- tion (-) 1925-1930
Equi- table	199.0%	-65.0%	+	110.0%	70.0%	+
Mutual	-29.0	- 8.0	-	423.0	.5	+
New York	871.0	48.0	+	107.0	106.0	+
Metro- politan	135.0	42.0	+	152.0	101.0	+
Connec- ticut	2087.0	-66.0	+	67.0	32.0	+
Trav- elers	442.0	37.0	+	285.0	146.0	+
Aetna	1101.0	-29.0	+	609.0	221.0	+

situation in which the two industries now find themselves. Railroads had ceased expanding and new borrowers were not frequent. Public utilities, on the other hand, were growing rapidly and new enterprises were the order of the day. This latter condition readily provides new investment fields permitting a thinner spread of loans than is available in the railroad industry. The Mutual of New York shows particularly an impressive diversification record between 1925 and 1930, having increased its total holdings of public utility bonds 423 per cent while its average holdings per borrower increased at a rate hardly perceptible, only $\frac{1}{2}$ of one per cent.

¹Source- N.Y. and Conn. State Life Insurance Reports.

E. Diversification of Investments in Industrial Bonds.

As was earlier shown, insurance companies have invested only a small portion of their funds in industrial bonds. In 1930 this portion represented only 1.55 per cent of the total admitted assets of all the companies. The speculative character of this type of security places it somewhat in a class with common stocks and like common stocks such bonds have been viewed by the companies as generally unsuitable for considerable investment. One would, therefore, expect a decided tendency for diversification of debtors to increase for such investments. The following table indicates that such is clearly the case. In addition, it will also be seen that the average amount loaned has actually been decreased by one-half of the companies examined from 1925 to 1930.

TABLE XVIII

DIVERSIFICATION OF INVESTMENTS IN INDUSTRIAL BONDS
OF 7 LIFE INSURANCE COMPANIES 1915-1925-1930¹

Company	Per cent Increase of Total Indus- trial Bonds 1915-1925	Per cent Increase in Aver- age Am't Loaned per Bor- rower. 1915-1925	Increased Diver- sifica- tion (+) Decreased Diver- sifica- tion (-) 1915-1925	Per cent Increase of Total Indus- trial Bonds 1925-1930	Per cent Increase in Aver- age Am't Loaned per Bor- rower 1925-1930	Increased Diver- sifica- tion (+) Decreased Diver- sifica- tion (-) 1925-1930
Equi- table	6.0%	-11.0%	+	202.0%	- 3.0%	+
Mutual	104.0	-47.0	+	68.0	28.0	+
New York	No Data					
Metro- politan	558.0	58.0	+	210.0	68.0	+
Connec- ticut	208.0	-114.0	+	20.0	- 5.0	+
Trav- elers	-56.0	-56.0	0	3929.0	1247.0	+
Aetna	465.0	-37.0	+	172.0	57.0	+

¹ Source- N.Y. and Conn. State Life Insurance Reports.

The Mutual of New York, for example, for the three years, 1915, 1925 and 1930 shows the average amount of total loans made to any one borrower to have been \$1,365,000, \$1,002,000 and \$713,000 respectively.

F. Summary of Diversification of Debtors in Bond Investments.

It is recognized that the sample used to test diversification was limited in comprehensiveness, yet it is believed, however, that it does portray to a large degree the status as to diversification of the larger eastern companies. The conclusion is that the total investments in corporate bonds are increasing more rapidly than the average amounts invested in any one corporation. This is most notable in the case of investments in Public Utility bonds and Industrial bonds. The tendency towards increased diversification is noted as well in the investment in railroad bonds but the trend here is not quite as pronounced.

G. Distribution of Bond Investments According to Maturities.

Financial writers have frequently emphasized the importance of diversifying bond investments according to their maturities. As an investment principle it has as its object the minimizing of possible losses arising from the uncertainty of future interest rates. Ralph Badger in his Investment Principles and Practices, expresses the typical argument advanced for maturity diversification.

"Diversification according to maturity dates is still another method of insuring against losses. As previously noted, the prices of high grade bonds vary inversely with interest rates. That is, high interest rates are accompanied by high bond yields, or low bond prices. Conversely, low interest rates are accompanied by low yields and high prices. Let us suppose, however, that a large proportion of the investments of a specific fund mature at a time when interest rates are extremely low. The reinvestment of such funds can be effected only on disadvantageous terms, because of the general market situation. Contingencies such as this can be guarded against, however, by purchasing bonds with varying maturity dates. ... In some cases the problem of maturities is governed by other factors. The investments of life insurance companies represents premiums collected in advance. On account of the actuarial basis on which risks are assumed, the company can predict with some accuracy the amount of the payments it will be required to meet each year, on the basis of policies in force at any given time. The maturity of life insurance investments, therefore, should be so selected as to provide the

company with the necessary funds to enable principal payments to be made on its policies. A great majority of the contracts of life insurance companies run for relatively long periods, and for this reason long term bonds are generally purchased by such companies in preference to short term bonds or notes."¹

The writer is in considerable agreement with the general thesis advanced but takes exception to the argument which purports to indicate one of the functions which diversification of maturities serves in life insurance investments. The point that, in the main, the obligations of insurance companies extend into the future and make long term investments particularly appropriate is well taken. The statement that maturity dates may be gauged with maturing obligations is not so clear. The opinion that a planned program whereby bond maturities and policy maturities are made to coincide fails to recognize the fact that the investment portfolios of life insurance companies are not ordinarily called upon to meet current obligations. The income of insurance companies is normally greater than current obligations; this feature of insurance finances will be considered in a later chapter.

The need for maturity diversification in insurance investments would seem to arise primarily from the risk of changing trends of interest rates. Should a relatively large portion of the bond investments of a company happen to mature in a period when interest rates were low or generally falling, the unfavorable condition for reinvestment is obvious. On the other hand, should the period be favorable, possession of a large amount of maturing obligations would be advantageous. This situation suggests the likely place in investment administration for forecasting interest rates and price levels to determine the timing of maturities. If it seems likely that during the years immediately ahead, interest rates will decline, investments will be made for a long term and thus avoid the necessity of reinvesting after a few years at lower rates. Conversely, if interest rates appear to be rising, a condition that is deemed likely to continue for some period of time, short term investments will be appropriate, so that the funds will be back in hand in time for reinvestment to better advantage. This perfect precept is, of course, difficult to realize in practice. One will recall the experience which occurred about the beginning of the present century, when the most prominent financiers of the day were asked to express their opinions as to what rate of interest a life insurance company could reasonably count on in making its investments over the following twenty years.

¹ New York: Prentice Hall, 1929, pp. 105-106.

Commodity prices and interest rates had been falling for many years. The majority of eminent opinion was that a strong demand for bonds would continue, with an interest rate of from 3 per cent to $3\frac{1}{2}$ per cent as the probable one which the investor would have to expect.¹ With this outlook, the wisest policy seemed to be to buy long term bonds, as falling interest rates made it desirable to avoid having to reinvest within a few years. Under such conditions, moreover, prices of long term bonds would be enhanced more than short ones, and falling commodity prices would make bonds more attractive to many classes of investors by giving large purchasing power to the periodic interest payments and to the matured principal.

The expectations of the late nineties were, of course, far from realized. Between 1900 and 1917 interest rates on prime corporation bonds rose approximately 1 per cent and under the influence of war time needs for capital this rising tendency was accentuated, reaching its crest in 1920, when such bonds sold to yield about $5\frac{1}{2}$ per cent, or 2 per cent more than twenty years before. From the peak of the middle of 1920, interest rates on such bonds for the following ten years declined. During those ten years the holder of short term securities was forced to reinvest under almost constantly declining interest rates, while the buyer of long term bonds in 1920 had a substantial interest return and an appreciation in market price.

The foregoing points not only to the difficulties in the way of forecasting but suggests the wisdom of minimizing the danger of wrong judgments as to the future course of interest rates by spreading maturities, which in turn requires the holding of medium and longer term bonds as well as short term securities.

An examination of the bond schedules of two of the larger companies indicates the degree to which bond investments have tended to be distributed according to their maturities. The results are shown in Table XIX.

One is impressed by the fair degree of evenness of the distribution which extends without considerable variation to the close of 1960. It will also be observed that the two companies present quite comparable distributions. It will be noted further that approximately three-fourths of the total investments mature before 1960 and fall due in about equal amounts for each of the three ten year periods between 1930 and 1960. From 1960 maturities taper off but not uniformly. Insofar, then, as the spreading of

¹Dwight Rose, Investment Management. (New York: Harpers and Brothers, 1928), pp. 269-300.

TABLE XIX

DISTRIBUTION OF BOND INVESTMENTS BY MATURITIES
OF 2 LIFE INSURANCE COMPANIES 1930

(000 omitted)

Maturity Dates by 10 Year Periods	Total Amount of Bond Investments		Per cent of Total Bond Investments	
	Equitable Life	Mutual Life	Equitable Life	Mutual Life
1931-1940	\$ 65,358	\$ 97,583	18.6%	21.2%
1941-1950	88,040	115,918	25.2	25.2
1951-1960	87,993	109,426	25.2	23.7
1961-1970	43,377	69,341	12.4	15.1
1971-1980	14,926	24,215	4.3	5.3
1981-1890	9,371	13,632	2.8	2.9
1991-2000	28,299	23,340	8.2	5.0
2000-	11,709	6,931	3.3	1.6
Total	\$349,073	\$460,386	100.0%	100.0%

maturities is concerned it would appear that insurance companies, if the two sample cases may be considered as representative, are definitely disposed to hedge themselves against loss due to the future trends of interest rates.

Aside from indicating investment policy with respect to the spreading of bond maturities the bond schedules as reported give little clue as to the extent to which insurance companies are investors in short term securities. The general opinion exists that by virtue of the character of the obligations which the companies assume, the investments made in bonds will naturally be confined largely to long term issues. This opinion is substantiated in good part by the tabulations noted in Tables XX and XXI. However, insurance companies do apportion their funds in shorter maturities although not to any extent comparable to the amounts regularly placed in long term securities. Equipment bonds are as a rule quite important in the bond portfolios of the average company holding any sizeable amount of railroad issues. The data tabulated in Table XX are illustrative.

If one may assume that on the average 10 per cent. of the railroad bond investments held by an insurance company are equipment issues, this would have represented 1.74 per cent of the

¹Source- New York State Life Insurance Reports, 1931.

TABLE XX

RAILROAD EQUIPMENT BONDS AND TOTAL RAILROAD BONDS
HELD BY 3 COMPANIES IN 1930¹

(000 omitted)

Company	Total Bonds	Total Railroad Bonds	Total Railroad Equipment Bonds	% of Equipment to Total R.R.Bonds	% of Equipment to Total Bond Investments
Equitable	\$ 409,786	\$233,895	\$26,305	11.%	6.%
Mutual, N.Y.	121,029	350,351	43,018	12.	8.
Metropolitan	1,283,061	668,232	89,309	13.	6.

total admitted assets of all companies in 1930.

Short term notes other than equipment issues are found in the portfolios of many of the companies but represent only a small fraction of the total investments. An examination of the 1930 bond schedules of four companies discloses the following relative position of short term notes to total bond holdings:

TABLE XXI

PERCENTAGE OF NOTES TO TOTAL BONDS AND NOTES
OF 4 LIFE INSURANCE COMPANIES 1930²

Company	Total Bonds & Notes	Total Notes	Per cent of Notes to Bonds & Notes
Equitable	\$ 409,786,000	\$1,300,000	.3%
Metropolitan	1,283,061,000	6,686,000	.5
New York Life	709,244,000	3,884,000	.5
Travelers	239,653,000	5,600,000	2.3

The evidence drawn from the foregoing series of data strongly indicates that the companies on the average have about 10 per cent of their bond investments in maturities ranging from one to ten years. This is exclusive of serial issues, which are held in varying amounts, some of whom would rightfully fall in the short term investment class. The difficulty of isolating such issues necessitated their exclusion here.

¹Source- New York State Life Insurance Reports, 1931.

²Op. cit.

H. Marketability of Bond and Stock Investments.

The statement has often been made that a growing life insurance company does not need to give considerable attention to the factor of marketability of its investments. Its contracts run for a long term of years and cannot be canceled by the company, in contrast to the short term contracts of casualty and fire insurance companies, which must be in a liquid financial condition in case either the insured or the company elects to cancel. It is further pointed out that the rapid rate at which life insurance companies are growing gives them at all times sufficient funds with which to meet claims.

Granting that marketability is not a quality essential to all the investment holdings of a life insurance company it may be held that a part, at least, must have a ready market, should emergencies arise in which the current income would be inadequate to take care of current claims. A sudden rise in policy loans might precipitate a situation of this kind. Similarly an unusually unfavorable mortality experience, as was witnessed during the influenza epidemic of the war period may cause such an increase of policy claims as to force portfolio liquidation. In either event marketable securities would be necessary to avoid the taking of losses.

A further claimed advantage of having highly marketable securities in the investment portfolios of a life company is that it makes possible the shifting of securities to take advantage of changes in interest rates. In addition to spreading maturities as an insurance against such changes of this kind, it is desirable to have readily salable bonds, so that when fundamental conditions indicate a fall in interest rates, with a consequent rise in bond prices, the proportion of long term bonds may be increased.

The investigation here, however, is not so much concerned with the issue of the desirability or undesirability of marketable securities nor will any attempt be made to ascertain what proportion, if any, of the total investments should consist of salable securities. It will rather consider what appears to be the general practice of the companies with regard to the holding of such securities.

As was noted in Chapter III, insurance companies as a group divided their investments about equally between real estate mortgages and bonds and stocks. In 1930 the former represented 39.82 per cent and the latter 38.53 per cent of the total admitted assets. In addition policy loans and real estate accounted for 14.27 and 2.07 per cent respectively of the total assets. From the standpoint of marketability the last two can be ruled out at once. Real estate mortgages are generally recognized as being "slow."

This leaves only bonds and stocks on which the companies may possibly rely for their required liquidity.

Since most bonds and stocks, or for that matter any other investment security, can be sold at a price, the term "marketability" is entirely relative. The gauge of ready saleability is best expressed by the extent of the market spread between the bid and asked price. United States government bonds possess the highest degree of marketability. As was earlier noted, insurance companies held 1.67 per cent of their total admitted assets in this form in 1930. As for the remaining classes of securities no generalizations can be made with any great assurance. As a class, state, county, and municipal bonds have a rather restricted market. Much, of course, depends upon the separate issues held. It is likely that they furnish a good basis for bank loans that would thereby assure that cash would be available upon short notice. It would probably not be inaccurate to recognize such securities as among the more liquid investments of the companies. In 1930 such bonds accounted for 3.04 per cent of the total admitted assets.

High grade railroad bonds are highly marketable. Public utility bonds as a class could not be disposed of as readily. The latter represent in good part enterprises possessing narrow markets. Industrial bonds, and stocks of the type held by insurance companies are in the main listed on the larger exchanges. They would possibly rank close to high grade railroad bonds in marketability.

Marketability after all depends entirely upon the character of the individual securities making up a given class. Generalizations based, therefore, on classes of securities can be made with some safety only in the case of United States government bonds. To ascertain in some greater detail the possible marketability of the issues in the other investment divisions, the bond schedules of two representative companies were examined. Each issue held was checked according to the general rating given it by Moody. The results are tabulated in the following table.

TABLE XXII

MOODY'S RATING OF ALL THE BOND ISSUES
HELD BY 2 LIFE INSURANCE COMPANIES 1930¹

Total Number of Issues	Rating								
	AAA	AA	A	BAA	BA	B	CAA	CA	C
1174	515	372	208	57	20	2	---	--	--

¹Equitable and Mutual, New York.

It will be noted that the great percentage of the total issues fall in the triple-A classification and that issues falling below BAA are clearly the exceptions. Such conclusive evidence of the high quality of the securities held by insurance companies strongly indicates that under ordinary conditions they also possess a high degree of marketability.

One may conclude that life insurance companies taken in the aggregate are maintaining a strong liquid position. With government bonds as a first line of defence, there is the considerable secondary support of triple-A railroad and public utility bonds. On the other hand, companies taken individually present varying degrees of liquidity. As was shown in Chapter III, one company examined held no corporation bonds and only 1.90 per cent of its total assets were in the form of government securities. In contrast, another company held 51.14 per cent of its assets in bonds and stocks of which over two-thirds represented high grade railroad bonds. The first situation, however, was an exceptional one for only three out of the twenty companies examined held less than 20 per cent of their assets in bonds and stocks.

CHAPTER VI

INVESTMENT EARNINGS

A. The Significance of Investment Earnings.

The preceding three chapters have dealt primarily with investment policy as it has concerned the various aspects of security diversification. An examination of investment earnings, now to be considered, suggests in a sense, a certain break in the trend of the analysis up to this point. Whereas the study has been directed more towards an investigation of investment method the character of the analysis in this chapter and the next will be concerned essentially with investment results.

There are several reasons why the investment earnings of life companies are of importance. The first reason arises from the fact that they must be adequate to meet the technical requirements imposed by the policy reserves. As was briefly indicated in Chapter I, insurance companies operating under the level premium plan come into possession of funds arising from the premium income which are more than adequate to meet the losses experienced in the early policy years. Such funds will naturally be invested and utilized to augment the premium charges which are "deficient" in the later policy period. It was also shown that since interest earnings will be realized, the practice has been adopted by legal reserve companies of crediting the policy account with the discounted value of such earnings at some assumed rate when computing the premium charge. Since the interest rate so assumed becomes a factor along with other actuarial devices for valuing the net reserves, it likewise is a determinant in establishing the solvency of a company. Hence, states, in exercising their control over insurance companies, have adopted certain standards of reserve valuation, one of which applies specifically to the rate of interest that a company may properly assume.¹ Should interest earnings, therefore, fail to come up to the standard, insolvency is inevitable unless an adequate surplus exists for taking care of the deficiency.

Investment earnings are again of importance in that they

¹An examination of the legal requirements of the forty-eight states reveals that the most generally adopted rates are 3½ per cent and 4 per cent.

may be instrumental in materially reducing the cost of insurance to the policyholders. This, it may be added, is in addition to the assumed rate adopted for reserve valuation as noted above, for it must not be overlooked that the amount of discount reflected in the premium calculation is certainly a factor bearing on cost of insurance.

B. Methods Employed and Procedure Followed in Measuring Investment Performance.

In evaluating the investment performance of life companies the question arises as to the proper basis of measurement. Two methods may be followed. In one, the annual cash income, including amortized premiums and discounts is divided by the average amount invested during the year. The result is expressed in what might be termed a rate of cash or current return. In the other method, the rate of return is calculated to reflect not only the current cash return but also all investment gains and losses including market fluctuations. It may also be added that in the first method book values are commonly employed whereas in the second method, the market value of the assets are taken as a basis.

For the purposes of this study investment results will be shown as indicated by both the rate of current return and the rate wherein investment fluctuations are taken into account.

The rates of current return submitted will be those taken either from the Spectator or Best Reports. The gross earning ratios on total investments will be taken from the Spectator Year Book as well as the ratios showing the per cent of net interest earnings on total investments to the total interest required for the reserves. The fact that the Year Book does not indicate the earnings of individual classes of investments has made it necessary to supplement with data submitted by Best's Annual Reports. The latter lists the earning ratios of the various classes of investments such as bonds and stocks, mortgages, policy loans, collateral loans, real estate, and cash. The ratios are not net earning rates, however, since investment expenses are not considered. Net yields are, nevertheless, shown for total invested assets and these when compared with the gross yields on total invested assets as reported by the Spectator Year Book do furnish some basis for approximating at least the investment expense ratios of the companies examined.

The calculation of investment earnings on total investments using mean market values as a basis and allowing for investment gains and losses including market fluctuations will be based on the

Zartman formula.¹

The analysis of investment results falls logically into three divisions. The first using data obtained from the Spectator Year Book, will consider net investment earnings as compared with that required by law to maintain policy reserves.

The second stage of the analysis will be concerned with an investigation of the gross and net earning rates (current return basis) and the gross earning rates (market value basis) on the total investments of twenty-six companies.² The gross and net earning rates (current return basis) will also be shown for a group of fifteen mid-west companies.³ The former groups will be designated the "large" companies, the latter, the "small"

¹Formula employed adopted from Lester Zartman, op. cit., p. 72.

Illustration:

Market Value of Assets		
Dec. 31, 1903	\$52,416,000	
Dec. 31, 1904	<u>56,228,000</u>	
Mean Market Value, 1904		\$54,322,000
Market Value over Book		
Dec. 31, 1903	315,000	
Dec. 31, 1904	<u>585,000</u>	
Increase in Market Value		\$270,000
Profit Sale of Bonds		221,000
Profit and Loss		<u>5,000</u>
Total Investment Gain		496,000
Loss, Sale of Real Estate	46,000	
Loss, Adj. Book Value	<u>92,000</u>	
Total Investment Losses		138,000
Investment Fluctuations, 1904		+ 358,000
Accrued Interest		
Dec. 31, 1903	380,000	
Dec. 31, 1904	<u>280,000</u>	
Accrued Interest, 1904		-100,000
Interest Receipts, 1904		2,456,000
358,000 + 2,456,000 - 100,000 = 2,714,000, Total		
Investment Earnings.		
Rate of Earnings	<u>2,714,000</u>	= 5.1 per cent.
	54,322,000 - 1,357,000	

²In the computations using market values as a basis, an additional company is employed in the sample making a total of 27. See Appendix I-A for list of companies.

³See Appendix II-A for list of companies.

TABLE XXIII

PERCENTAGE OF NET INTEREST EARNED ON TOTAL INVESTMENTS
TO INTEREST REQUIRED OF 27 LIFE INSURANCE COMPANIES
(AVERAGES OF 4 YEAR PERIODS 1920-1931)^{1,2}

Company	Average 1920-1923	Average 1924-1927	Average 1927-1931
Equitable, N.Y.	168	164	165
Guardian	179	193	186
Metropolitan	144	154	153
Mutual	168	163	163
New York	180	182	170
Home	189	165	168
Connecticut Mutual	158	160	153
Phoenix	160	155	148
Travelers	138	135	143
Connecticut General	155	152	142
John Hancock	145	151	146
Northwestern	138	174	172
Penn	186	179	167
State	161	176	173
Aetna	167	147	131
Berkshire	142	146	150
Columbian National	164	159	130
Fidelity	163	167	158
Massachusetts	152	162	155
Mutual Benefit	168	172	167
National	174	162	156
Prudential	137	145	144
Provident	144	148	147
Bankers, Iowa	231	151	136
Equitable, Iowa	158	159	143
Union Central	176	154	146
New England	152	170	175

¹ Source- Spectator Insurance Year Book.

² Since the companies operate on either 3 or 3½ per cent assumed rate basis, the computations as noted in the table are not comparable as between companies.

companies.

Finally, an examination will be made of gross earning rates (current return basis) realized by the twenty-seven companies on their principal classes of investments which include bonds and stocks, real estate mortgages, and policy loans.

C. Interest Earnings and Policy Reserve Requirements.

That the companies have never failed to obtain a net yield on their investments sufficient to meet interest requirements to which they are committed is indicated in Table XXIII. It will be noted here that the companies at intervals over a period of twelve years have, on the average, earned rather a substantial margin over that which has been required.

D. Earning Rates of a Group of "Large" Insurance Companies on Total Investments.

As is indicated in Table XXIV, (column 1) gross rates on book values of total investments for twenty-six companies have been consistently above 5 per cent, the high being reached in 1926, the low being registered in 1920. It will be further observed that no considerable variation has obtained during the period. This is largely accounted for by the fact that the basis upon which the rates are computed has been book values. On the other hand, where market values have been employed as a bases (see column 2) with investment fluctuation and all investment gains and losses taken account of, the variations are quite marked. Even so, the average rate of return on either basis for the entire twelve year period, is much the same, being 5.37 per cent on book values and 5.60 per cent on market values.

In compiling the aggregate in Table XXIV, it was noted that the gross rates on book values, that is current returns, were consistently greater than the average for such companies as the Guardian, the Union Central, and the Equitable of Iowa. The averages of the annual returns which they have experienced for the twelve year period were 5.81, 6.05, and 5.58 per cent respectively.¹ Explanation of this is suggested by referring to their individual investment portfolios in Table VIII. As is seen, these three companies have specialized in real estate mortgages and, as is well known, mortgage loans of this character carry a higher interest return than do high grade corporation bonds which are more

¹Eugene Trygve Halaas, The Investments of Life Insurance Companies, Doctor's Dissertation, University of Chicago, 1933, pp. 138-139.

TABLE XXIV

EARNING RATE ON TOTAL INVESTMENTS

Year	(1) Gross Rate of Interest on Total Assets 26 Co's (Book Values)	(2) Gross Rate of Earnings on Total Assets 27 Co's (Market Values).	(3) Net Rate of Interest on Total Assets 26 Co's (Book Values)
1920	5.14%	4.20%	4.81%
1921	5.40	6.57	5.03
1922	5.34	6.96	5.10
1923	5.47	4.84	5.16
1924	5.45	7.00	5.08
1925	5.40	6.00	5.13
1926	5.66	6.14	5.10
1927	5.35	6.43	5.05
1928	5.38	4.65	5.08
1929	5.34	4.74	5.05
1930	5.33	5.19	5.02
1931	5.23	4.76	4.80
Average	5.37	5.60	5.03

important in the investment portfolios of the other companies in the group.

Turning to column 3 in Table XXIV which indicates the net rates of return computed without allowance for investment fluctuation, one notes a greater uniformity than obtains when the annual gross returns on book values are compared. Whereas gross earnings vary from a low of 5.14 per cent to a high of 5.66 per cent, net rates vary from a low of 4.16 per cent to a high of 5.16 per cent. Here too, the companies which hold the largest ratios of real estate mortgages were found to have had the highest returns. The Equitable of Iowa and the Union Central with averages for the twelve year period of 5.20 per cent and 5.30 per cent respectively led the field followed by the Fidelity, and the Guardian, all large holders of real estate mortgages.

With regard to the trend of earnings during the period under review one notes no general and sustained movement of the averages on book values either gross or net. It is to be observed, however, that a distinct drop in both gross and net is recorded in 1931, each rate representing the lowest average since 1920.

E. Earning Rates of a Group of "Small" Insurance Companies on Total Investments.

So far, the study of the returns on total investments has

dealt with a group of "large" companies. Since this group controlled approximately 85 per cent of the total invested assets of all American companies in 1931, results achieved by this particular group are correspondingly inclusive. It is of interest, however, to direct some attention to the investment accomplishments of smaller companies largely for the reason that as a class their investment distribution differs somewhat from the former group. This is readily observed from the comparison in the following table.

TABLE XXV

PERCENTAGE DISTRIBUTION OF ASSETS OF 2 GROUPS
OF LIFE INSURANCE COMPANIES COMPARED 1925-1930¹

Asset	1925		1930	
	26 "Large" ² Companies	15 "Small" ³ Companies	26 "Large" Companies	15 "Small" Companies
Real Estate				
Mortgages	39.8%	57.7%	39.8%	48.4%
Bonds & Stocks	40.8	12.6	38.5	17.8
Premium Notes & Policy Loans	11.8	15.9	14.2	18.6
Real Estate	1.5	6.3	2.0	7.8
Other	6.1	7.5	5.5	7.4
Total	100.0	100.0	100.0	100.0

Turning to Table XXVI which indicates the gross and net returns as computed without allowance for investment fluctuations, one notes that the gross returns of the "small" companies have continuously exceeded those of the other group throughout the entire twelve year period. When net rates are compared, however, this situation is not quite the same since in five years out of the twelve, the net rates realized by the "large" companies exceeded those of the small companies.

When the investment expense ratios of the two groups are considered the large companies appear for the first time at a

¹Source- Spectator Insurance Year Book.

²See Appendix I-A for list of companies.

³See Appendix II-A for list of companies.

TABLE XXVI

GROSS AND NET EARNING RATES OF TOTAL INVESTMENTS
OF 2 GROUPS OF LIFE INSURANCE COMPANIES 1920-1931¹

Year	Average Annual Gross Earning Rate of Total Invest- ments of 26 Co's.	Average Annual Gross Earning Rate of Total Invest- ments of 15 Co's.	Average Annual Net Earning Rate of Total Invest- ments of 26 Co's.	Average Annual Net Earning Rate of Total Invest- ments of 15 Co's.	Difference Between Gross & Net 26 Co's.	Difference Between Gross & Net 15 Co's.
1920	5.14%	5.93%	4.81%	5.35%	.33%	.58%
1921	5.40	5.94	5.03	5.48	.37	.46
1922	5.34	5.68	5.10	5.60	.24	.08
1923	5.47	6.09	5.16	5.54	.31	.45
1924	5.45	6.06	5.08	5.23	.37	.83
1925	5.40	5.71	5.13	5.08	.27	.63
1926	5.66	5.73	5.10	5.05	.56	.68
1927	5.35	5.85	5.05	5.16	.30	.69
1928	5.38	5.55	5.08	5.07	.30	.48
1929	5.34	5.58	5.05	5.06	.29	.52
1930	5.33	5.50	5.02	4.92	.31	.58
1931	5.23	5.37	4.80	4.66	.43	.71
Average 1920-1931	5.30	5.73	4.94	5.47	.36	.53

decided advantage. Roughly, the averages are one-third, and one-fourth of one per cent of the total investments for each of the two groups taken in order of increasing size.

An explanation of the relative position of the two company groups insofar as investment results are concerned was suggested in Table XXV which showed their respective investment holdings. Real estate mortgages, as was seen, play a more important investment role with the group of "small" companies than is true in the case of the other group. This explains in some measure why its gross returns should exceed those of the first group which is more heavily involved in low earning high grade bonds. The fact, however, that the "small" company group's investment expense ratio is the largest, points to many foreclosures and heavy holdings of

¹Source of gross earnings data, Spectator Insurance Year Book, of net earnings data, Best Life Insurance Reports, 1921-1932.

real estate which are relatively costly investments to administer. Evidence that this is the actual situation is again indicated in Table XXIV, which shows that in 1930 the real estate investment of this group amounted to 7.8 per cent of its total admitted assets, a ratio considerably above that of the other group.

Up to this point, the analysis has been confined to the earnings of the total investments of the companies. The returns which have been realized from various classes of investments will now be considered. Since data are not available on net earnings, gross rates as reported by Best will be employed throughout. The sample of companies used will include the twenty-six companies designated in the preceding paragraphs as the "large" companies.¹ The period covered extends from 1920 to and including 1931.

F. Earning Rate of Bonds and Stocks (Current Return).

Since company reports do not separate earnings realized as between stocks and bonds nor between various classes of bonds, an examination of the returns realized from the combined stock and bond holdings will of necessity lack the precision of analysis which otherwise would have been possible. For certain comparative purposes, however, the information as it stands is of some use.

Table XXVII (column 1) showing the rates of current interest on bonds and stocks, indicate what the experience of the larger companies has been for the past twelve years. The fact that stocks have been of negligible investment importance at any time means that the results as shown can in the main be attributed to bond investments.

One will note that the average of the average annual rates for the entire period is 4.77 per cent. This, compared with the rate of 5.37 per cent (book values) which was the rate of current return realized on the total invested assets for a similar period verifies the assumption made at an earlier point, that the bond investments as a class were in the lower yield group.

In compiling the group averages it was noted that several companies have consistently received a higher annual return than generally obtained for most of the other companies in the group. The Connecticut General, and the Columbian National, for instance, have regularly earned over 5 per cent.² By way of explanation,

¹An additional company is included in the sample, making the total twenty-seven.

²Eugene Trygve Halaas, "The Investments of Life Insurance Companies" (Ph.D. dissertation, March 1933, on file in the University of Chicago Libraries), pp. 155-156.

TABLE XXVII

GROSS EARNING RATE OF BONDS AND STOCKS, REAL ESTATE
MORTGAGES, AND POLICY LOANS OF 27 COMPANIES 1920-1931

Year	(1) Earning Rate of Bonds & Stocks	(2) Earning Rate of Real Estate Mortgages	(3) Earning Rate of Policy Loans
1920	4.50%	5.47%	5.50%
1921	4.70	5.77	5.60
1922	4.60	5.85	5.50
1923	4.90	5.91	5.50
1924	4.80	5.70	5.60
1925	4.80	5.65	5.60
1926	4.90	5.54	5.60
1927	4.80	5.49	5.60
1928	4.80	5.44	5.70
1929	4.90	5.41	5.70
1930	4.80	5.34	5.80
1931	4.80	5.30	5.90
Average	4.77	5.57	5.63

one may point to the former company as holding a greater proportion of stocks than any other company in the group.¹ The Columbian National, on the other hand, is one of the smaller companies, and holds the highest proportion of public utility bonds of any company having this type of security in its portfolio. Its relative holdings of railroad bonds are, however, the lowest of any company having investments in rails.² Large holders of railroad bonds appear to have realized the lowest return over the period. This is suggested particularly by the Mutual of New York which has over 33 per cent of its total assets in railroad securities. Its average return over the twelve year period was 4.50 per cent.³

G. Earning Rate of Real Estate Mortgages (Current Return).

The annual rates of return realized on real estate loans is indicated in Table XXVII, column 2. Since data on earnings are not separately available for farm and city loans the rates as shown represent the total mortgage income. It will be noted that

¹See Chapter III, Table VIII.

²Ibid.

³Ibid.

for the past twelve years the annual rates have ranged in the neighborhood of 5½ per cent. Again attention must be called to the fact that the earning rates here recorded do not allow for investment losses nor do they take into account investment expenses. As they stand they represent what the actual cash income has been on all real estate loans. If allowance were made for investment losses the results during the past few years would indicate some changes though they would not be considerable in most cases.

It will be observed that a distinct downward tendency in the yearly averages occurs from 1923 on. This synchronizes with the trend noted earlier for the holdings of farm mortgages to decline from about that time. Other real estate mortgages, however, did not begin to decline until 1928, but that a movement downward did begin, gives further recognition to the fact of the declining profitableness of real estate mortgage loans in general.

Aside from the depressed condition of agriculture with its resulting effect on the earning rate of mortgage loans on farms the competition offered by the farm loan banks has been held to have an important factor in reducing the profitableness of farm mortgages.

H. Earning Rate of Premium Notes and Policy Loans.

Policy loans, which constitute by far the greater portion of the advances made by insurance companies to their policyholders differ essentially from their other investments. The main point of distinction lies, of course, in the fact that such loans arise out of the insurance end of the business and do not involve investment policy as such. Obviously, such loans are safe, since policy reserves are held as the basis for the extensions. Likewise, the interest return has been good, having, as noted in Table XXVII, column 3, averaged around 5.5 per cent and exceeding generally the gross return realized on other types of investments.

I. Summary of Investment Earnings.

The investment earnings of life insurance companies are of interest to a policyholder for the reason that they represent one of the principal means of reducing his cost of insurance. An insurance company is, in turn, concerned about its earnings since its financial stability is dependent upon its ability to earn at least its "assumed rate." In addition its competitive position is strengthened in direct ratio to the extent of its ability to offer contracts at a favorable rate. With these facts in mind, the foregoing study has dealt with:

1. The comparability of annual interest earnings with the annual amount needed to maintain policy reserves.
2. The earnings realized on total investments.
3. The earnings realized on different classes of investments.

1. The Comparability of Annual Interest Earnings with the Annual Amount Needed to Maintain Policy Reserves.

Since companies must assume a rate of interest on the basis of which premium charges are calculated conservatism dictated that a low rate be employed. This, at the present time, has been generally fixed at $3\frac{1}{2}$ to 4 per cent by state law although $3\frac{1}{2}$ is the rate used by most companies.

In view of the relatively low assumed rate employed by the companies the annual interest earnings have always exceeded by a safe margin the amount that has been required.

2. Earnings Realized on Total Investments.

The results of the study made of the total investment performance of insurance companies can best be presented by submitting them somewhat in the separate order of the analysis made. Briefly the essential findings were:

- a. On an average, the annual gross rate of return of a sample of large companies has been 5.37 per cent for the past twelve years. This rate represents the actual cash return divided by the mean invested assets taken at their book values. Companies in the group which held the greatest relative amount of real estate mortgages showed the highest annual returns, while those which held the largest relative amounts of bonds, particularly railroad bonds, were in the lowest earning group.
- b. On an average, the annual net rate of earnings for the same sample of companies and covering the same period of noted above was 5.03 per cent. Net rates were arrived at by dividing cash income from investments minus investment expenses by the mean book value of the total investments for the year. It was found here also that companies specializing in mortgage loans on real estate had on the average realized the larger net rates of return.
- c. Using mean market values and allowing for investment fluctuations in computing the rate of return results showed an average gross earning rate of 5.60 per cent over a period of twelve years. The average annual returns, however, disclosed considerable variations owing to the market factor that entered therein.
- d. Gross earning rates tend to decrease with the increase in

the size of companies. This is also true of net earnings. In large part this is due to the relatively larger holdings of real estate mortgages of smaller companies. Investment expense ratios, on the other hand, show an opposite tendency.

3. Earnings Realized on Different Classes of Investments.

Stocks and bonds show on the average an annual gross earning rate of 4.77 per cent.

Real estate mortgages have yielded on an average a gross rate of 5.57 per cent. A marked tendency for the average annual earnings to decline since 1923 coincides with a similar movement in the holdings of farm mortgages.

The earning rate on premium notes and policy loans is quite comparable to the return on real estate mortgages having averaged 5.63 per cent.

CHAPTER VII

INVESTMENTS AND THE SOLVENCY OF LIFE INSURANCE COMPANIES

A. Introduction.

The term "solvency" has a variety of interpretations. Its use here will be confined essentially to the designation of the state of affairs which enables a company to pay all its debts, both current and future. In the insurance business as well as in any other type of commercial enterprise, solvency is largely conditioned by the character of the assets held. Insolvency, as synonymous with bankruptcy, is indicated when the book value of the assets fall below the valuation of the liabilities. Accordingly, stability of asset values affords considerable assurance of safety at least in this regard. Insolvency, in a practical sense however, is not always shown by the financial statement. A shortage of available cash, for example, may prevent an organization from paying its debts despite the existence of a book surplus. Thus one finds two tests of solvency. One is that the book values of assets shall not fall below the book values of liabilities; second, that the company shall be able to meet its current obligations in cash, as these obligations mature. The degree to which the first has been met is reflected in the gain-and-loss exhibits which show the gains (other than direct investment income) and losses on the investments. The extent to which the second is realized is conditioned by the state of liquidity of the assets held and the relationship between the current flow of cash income and cash disbursements.

The purpose of the present chapter will be to examine this two-fold aspect of the investment operations of the companies. The first part of the study will consider the total investment gains and losses experienced by a group of life companies. Since such gains and losses are subject to modification by the system of valuation employed, some attention will first be given to this matter. The degree to which companies are in a position to meet current cash demands, the second test of solvency, is essentially indicated by first determining what obligations insurance companies have which require liquidity and then noting the provisions that exist for meeting these obligations. A consideration of this phase of insurance operations will represent the second major division of this study.

B. Relationship of the System of Valuing Securities to Investment Gains and Losses. Sources of Investment Gains and Losses.

Since liabilities of life insurance companies are primarily of a long term character, it follows that long term investments held to maturity would appear particularly appropriate. Since the avowed purpose of the investments is to secure the reserve liabilities, the character of such securities as companies invest in has been, as earlier noted, largely determined by law.

The fact that high grade securities are held, which presumably will be carried for the most part until maturity, lies at the root of the system of valuation employed. At the present time states generally recognize amortized values of fixed term securities as the proper basis of valuation. Stocks, however, and certain other securities which the state insurance commissioners may deem ineligible for valuation under the amortization principle, must be placed on the books and reported at their market values as of a certain date.¹

It will thus be seen that market fluctuations of such securities as are permitted to appear in the statements at their theoretical values will have no effect on a company's financial position as judged by the state supervising authorities. The market fluctuations of stocks and other securities that must be valued at the market are, however, taken into consideration by being added or subtracted, as the case may be, directly to, or from, "other gains or losses" making up the total annual increase or decrease of surplus. Because of limited investment in equities and lower grade bonds, such market gains or losses as will obtain will be of slight importance as far as they might influence the

¹Through the action of the National Convention of Insurance Commissioners, market values as of Dec. 31, have been abrogated seven times, most recently in 1931. The following are the adjustments that have been recognized.

1907 - Dec. 31, 1906 market values.

1917 - Average of market values as of Nov. 1, 1916, Feb. 1, May 1, Aug. 1, and Nov. 1, 1917 - dividing by 5; resulting average considered as proper value as of Dec. 31, 1917.

1918 - Add to above Nov. 30, 1918, divide by 2 to get market value Dec. 31, 1918.

1919 - Add above to Nov.1, 1919 and divide by 2.

1920 - Add above to Nov.1, 1920 and divide by 2.

1921 - Add above to Nov.1, 1921 and divide by 2.

1931 - June 30, 1931, market values but cost if securities were purchased after June 30.

final results.

Aside from the minor gains and losses that may accrue from the fluctuation in the market value of such securities that must be valued at the market, there are two other possible sources of investment gains and losses. The first, arises from the sale of securities, and the second, from write-ups or write-downs.

C. Gains and Losses on Total Investments.

As is indicated in Table XXVIII, the total investment losses for the entire twelve-year period for all companies transacting business in the state of New York, exceeded the gains by \$71,133,000. This represented only six three hundredths of one per cent of the mean admitted assets for the entire period.

TABLE XXVIII

TOTAL ANNUAL GAIN AND LOSS ON TOTAL INVESTMENTS OF ALL
COMPANIES DOING BUSINESS IN THE STATE OF NEW YORK 1920-1931¹
(000 omitted)

Year	Net Gain (+) or Loss (-) from Total Investments	Mean Admitted Assets	Per cent of Gain or Loss of the Annual Mean Ad- mitted Assets.
1920	-\$15,501	\$ 6,550,263	- .24%
1921	- 75,514	6,787,635	-1.11
1922	+ 21,568	7,308,856	+ .29
1923	- 13,434	7,907,328	- .18
1924	+ 32,367	8,614,865	+ .37
1925	+ 2,032	9,512,199	+ .02
1926	+ 16,110	10,578,626	+ .15
1927	+ 25,483	11,672,681	+ .21
1928	+ 16,422	13,054,201	+ .12
1929	- 5,745	14,369,802	- .03
1930	- 47,464	15,611,116	- .30
1931	- 27,457	16,031,259	- .16
Total	- 71,133	11,281,756 ²	-.63 ³

Although net gains were made in six out of the twelve years, the losses incurred in 1920, 1921, 1923, 1929, 1930, and 1931 were large enough to more than offset the gains made in the other years.

¹ Source- New York State Life Insurance Reports.

² Mean admitted assets for the entire period.

³ Total loss taken as a percentage of the mean admitted assets for the entire period.

The absolute loss in 1930 is particularly marked, although a larger percentage loss occurred in 1921. With the exception of 1921, however, gains and losses have varied within a range of approximately one-half of one per cent of the total annual assets.

The extent to which losses could have been taken is shown by the following statement of surplus funds of twenty-seven companies doing business in the state of New York.

TABLE XXIX

RATIO OF SURPLUS AND CONTINGENCY RESERVES TO NET POLICY RESERVES
AND TO TOTAL ADMITTED ASSETS OF 27 COMPANIES 1920-1931¹

Year	Ratio of Surplus and Contingency Reserves to Policy Reserves	Ratio Surplus and Contingency Reserves to Total Admitted Assets.
1920	5.46%	----%
1921	5.53	4.69
1922	6.93	5.81
1923	7.31	6.12
1924	7.84	6.72
1925	8.03	6.72
1926	7.77	6.67
1927	7.92	6.57
1928	7.78	6.42
1929	7.38	6.10
1930	6.74	5.63
1931	6.18	5.08

As is seen, combined surplus and contingency reserves have varied during the past twelve years from over 5 per cent to over 8 per cent of the net reserves and from over $4\frac{1}{2}$ per cent to over $6\frac{1}{2}$ per cent of the total admitted assets. The tendency for the ratios to decrease in recent years is marked. Apparently, dividends have been maintained in the face of decreased earnings and an increased mortality ratio.

In determining the sufficiency of a given amount of surplus, regard must of course be paid to the size of a company, the basis of reserves, the nature of the assets, and general economic conditions. In this connection it is important to note that a number of states, including New York, limit the surplus of a life company to a certain percentage of its net policy reserves. It is

¹Source- New York State Life Insurance Reports.

clear, however, that as far as investment losses are concerned, the surplus as indicated for the twenty-seven companies is certainly adequate.

The conclusion then is that, on the basis of statement values, investment gains and losses have been of small significance as far as the "technical solvency" of the companies has been concerned. As long as amortized values are used and as long as mortgages are valued at their principal amounts it does not appear likely that companies will present other than a "solvent" condition.

There are, however, three rather remote possibilities in addition to those not strictly dealing with investments, that may bring on conditions which may seriously reduce assets without a corresponding reduction of liabilities. The first is that stocks may eventually assume such a large position in the investment portfolios of the companies that market fluctuations will have a marked effect on the annual statement of surplus. There is the second possibility of bonds and mortgages becoming so weak as to result in numerous chargeoffs and losses through sale. This possibility is certainly remote since only a complete break-down of the financial order could possibly create a general situation of this kind. Finally, there is always the danger that portfolios may have to be liquidated at a loss; this concerns the second test of solvency, namely, that of liquidity, which will now be considered.

D. Cash Requirements of Life Companies.

Life companies feel the demands for cash from a number of sources which may be classified roughly into three separate groups. The first, and by far the most important constitutes all policy claims, including payments because of lapsations and surrenders. The second group embraces all expenses incurred in the normal operations of the business such as salaries, office overhead and miscellaneous. The third, which during the past few years has assumed considerable importance, arises out of the policy loan privilege incorporated in most insurance contracts. A failure to meet any of these demands would normally place a company into receivership despite its apparent strength as indicated by its statement of surplus.

E. Sources of Cash.

Turning to the sources from which cash may be made available for current needs, one finds that there are mainly four means, aside from cash already at hand, that serve to bring liquid funds into an organization. The first and most important is premium income, which constitutes approximately three-fourths of the total

cash income of the companies. The second is investment income in the form of interest, dividends, and rent. The third arises from the maturity of investments, such as bonds and mortgages falling due and paid in cash. The liquidation of assets constitutes the fourth source, which is to be distinguished from the other three, since it is ordinarily tapped to take care of emergencies only. It is clear that if the regular cash income flow from premiums, dividends, rental, and interest payments, in addition to such funds as come in from the maturity of investments, are adequate to take care of all cash demands, investments will certainly not be sold for this purpose at least.

F. Relationship of Cash Income to Cash Disbursements.

As was earlier seen, the cash holdings of insurance companies are normally below one per cent of their total assets, representing an amount, therefore, that would cause it to appear to be extremely low in view of the large cash disbursements required. This situation is largely explained on the grounds that normally the cash income exceeds the cash disbursements, leaving out of account cash income because of maturity and sale of assets and disbursements on account of policy loans which will be considered at a later point. This in turn follows from the nature of the system of premium payments and the accumulation of policy reserves and the fact that the life insurance business is continually growing. It is obvious that if a company ceased writing new business, but continued to exist only to pay off its maturing obligations, its assets would eventually be reduced until all of its reserves and other obligations had been completely extinguished. The process of liquidation would, however, extend as far into the future as there remained policyholders continuing to pay premiums and until all policy claims were paid. In a situation of this kind, cash disbursements would exceed cash income; this would be a gradual process at the beginning but would gain in momentum as time went on. On the other hand, new business placed on the books creates deposits in the form of reserves which greatly exceed mortality losses since early premium payments, under the system of level premium insurance, are above mortality losses by a margin sufficient to take care of the "deficit" in the later premiums.

The occasions when the normal relationship between income and disbursements would be broken, might arise as a result of a number of factors of which an unusual reduction in premium income and mortality losses greatly in excess of calculations based on experience tables would be the more important. In an established company, the first is a remote possibility. The second might occur although its effects may be considerably modified by

TABLE XXX

ANNUAL RATIOS¹ OF (a) PREMIUM INCOME,
(b) INTEREST AND RENT INCOME, (c) "OTHER INCOME,"
AND (d) TOTAL DISBURSEMENTS TO TOTAL ANNUAL INCOME
OF 27 LIFE INSURANCE COMPANIES 1910-1931²

Year	(1) Ratio of Annual Premium Income to Total Annual Income	(2) Ratio of Annual Interest Income to Total Annual Income	(3) Ratio of Annual "Other Income" to Total Annual Income	(4) Ratio of To- tal Annual Disbursement to Total An- nual Income
1910	73%	23%	4%	68%
1911	73	22	5	70
1912	73	24	3	68
1913	72	24	4	71
1914	71	24	5	74
1915	71	24	5	72
1916	71	23	6	72
1917	72	23	5	70
1918	68	22	10	70
1919	72	21	7	75
1920	74	20	6	65
1921	74	20	6	67
1922	74	20	6	69
1923	74	20	6	68
1924	74	19	7	69
1925	73	19	8	68
1926	72	19	9	66
1927	73	19	8	64
1928	72	19	9	65
1929	71	20	9	70
1930	71	20	7	73
1931	71	20	9	75

¹Ratios represent in each column averages of 27 individual ratios.

²Source- New York State Life Insurance Reports.

increased premium income at such times.

In Table XXX certain facts are tabulated which relate to the cash income and disbursement relationship that has obtained on the average for the twenty-seven companies over a period of twenty-two years.

It will be observed that with the exception of only seven years out of the twenty-two, the average ratios of premium income to the total income have exceeded the average ratios of total disbursements to total income. In other words, premiums may be said to have been more than adequate on the average to pay off all current claims. Some question may be raised as to the deviations from the average that may be indicated by comparing the averages with the ratios of individual companies in the group. It was found, however, that no material deviation existed in any case which justified the use of the arithmetic mean of individual ratios. It will be further observed that a sharp rise in the average ratio of total disbursements occurred between 1918 and 1919, which clearly reflects the unfavorable mortality experience of the companies during the influenza epidemic. It will also be noted that premium income also rose during the same period, but not to the extent that would enable it to offset the other ratio.

Rent and interest income has averaged about one-fifth of the total cash income which in addition to "other income" may be said to constitute on the average a total representing the excess of income over disbursements. This excess in any one year has ranged from 25 to 36 per cent of the total annual income.

From the foregoing it does appear that, as far as ordinary cash requirements are concerned, which include demands for cash because of policy surrenders and lapsations, the annual cash income has been more than adequate. There remains, however, the matter of determining the extent to which the demands for cash arising from policy loans could also have been met out of ordinary income. Should there be such a concentration of demands for loans that securities must be sold on the market to provide cash, the problem of having marketable securities available which can be disposed of without loss may become extremely important. Should portfolios be "frozen" or realized in cash at a great loss, insolvency is imminent. Bank loans may be resorted to in a situation of this kind provided such loans are then available to the extent required.

To determine the experience of the companies in the matter of meeting policy demands, two avenues of approach are desirable. The first is to consider a year or even a longer period during which policy loans showed a relatively large increase. By comparing this total with the available cash representing the excess of

income over disbursements plus the amounts received from maturing investments, some basis is furnished for judging the extent to which the companies may have found it necessary either to sell securities or to borrow.

The second approach is to examine a shorter period of time than one year, a time say of a few weeks covering a period when losses were known to have particularly great. The purpose here would be to determine to what extent companies fail in their day-to-day operations, which annual figures would fail to disclose. Some attention will accordingly be given to this matter.

To apply the test employing annual figures, the actual cash items for the years 1930, 1931, and 1932 are submitted in the following table. This period includes, of course, those years when the demand for policy loans was the greatest in the history of life insurance in this country.

TABLE XXXI

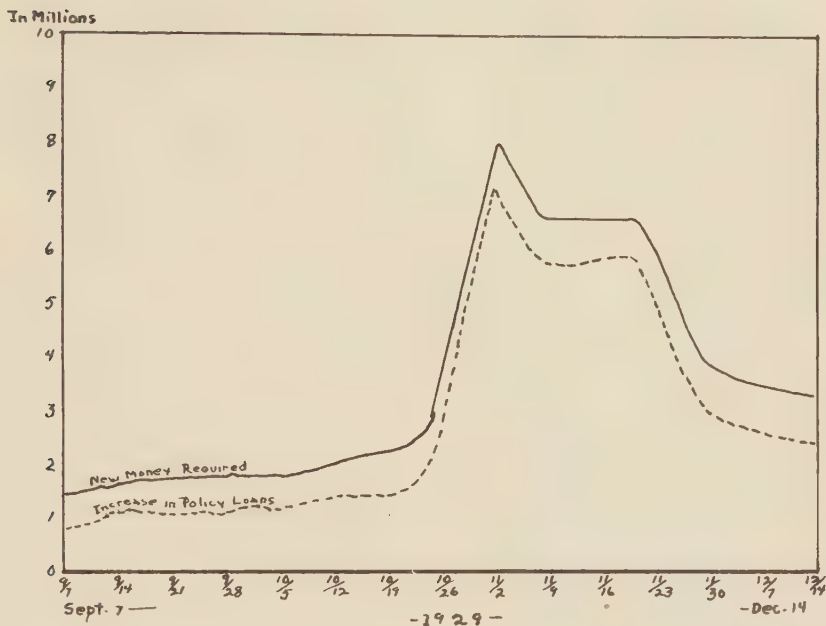
CASH POSITION OF 52 LEGAL RESERVE LIFE INSURANCE COMPANIES
1930-1931-1932¹

<u>Income (actual cash)</u>		
Premiums	\$7,586,082,000	
Interest, Rent, etc.	2,195,116,000	
Net Gain from Sales and		
Maturity of Investments	<u>36,299,000</u>	
Total Cash Income		\$9,817,497,000
<u>Disbursements (actual cash)</u>		
Matured Endowments	\$ 230,948,000	
Surrenders	1,414,252,000	
Dividends	212,583,000	
Death Claims	1,924,666,000	
Other	<u>337,992,000</u>	
Total Cash Disbursements		\$4,120,331,000
Excess Income over Disbursements		\$5,697,166,000
Policy Loans (actual cash)		<u>2,048,678,000</u>
Excess Income over Disbursements and		
Policy Loans		\$3,648,488,000
Matured and Sold Investments		<u>3,006,515,000</u>
Cash available for Reinvestment		<u>\$6,655,003,000</u>

The foregoing, aside from showing that the cash income has been more than adequate to meet the demands imposed by policy loans

¹Proceedings of the Association of Life Insurance Presidents, 1932, pp. 81-103.

CHART I
TOTAL NEW MONEY REQUIRED FOR POLICY LOANS (1) AND INCREASE
IN POLICY LOANS OUTSTANDING (2) OF 13 LIFE INSURANCE
COMPANIES (3) SEPT. 2 TO DEC. 14, 1929¹.



- (1) Taken from Best Insurance News, March 1, 1930.
M. A. Linton, Vice Pres. Provident Mutual.
- (2) New money represents amount of new loans and increase in outstanding loans less loans repaid in cash.
- (3) Amount of new money required differs from increase in outstanding policy loans cancelled by book entries. resulting from the cancelation of outstanding insurance through death, maturity or surrender.
- (4) 13 companies represent about 22½ of total ordinary insurance in force in the United States.
- (5) Total amount of new money required during eight weeks was \$42,700,000.

and surrenders, does not, however, indicate the situation as it might apply to shorter periods, such as from week to week. The second test earlier suggested will now be made to evaluate this phase of the question of liquidity.

The period of the stock market crash in 1929 is appropriate for this purpose since it marks a period in which the drains made on cash through policy loans were among the most severe ever experienced by the companies in such a short time. The preceding chart taken from a study of thirteen companies made by President Linton of the Provident Mutual, shows clearly how they were made to respond to the emergency created by the crash in the market. As is seen, the highest weekly withdrawal was \$8,300,000, which occurred in the week ending November 2. From this date until November 23, weekly withdrawals averaged above \$6,000,000 for the thirteen companies. This situation, no doubt, is representative of the experiences of most life companies at this time.

In view of the severity of the demands imposed during the thirteen-week period it is of interest to note whether or not the forced selling of securities became necessary. Since the names of the companies employed by Mr. Linton in his study are not disclosed, no other means are offered in the way of a check on this than to select a group of companies deemed quite representative for the purpose. Accordingly, eleven companies were chosen whose bond and stock purchases and sales were recorded weekly in Poor's Manual of security sales and purchases of insurance companies for 1929.

Table XXXII indicates the aggregate of purchases and sales of securities made during each of the thirteen weeks examined. Column 1, showing the aggregate purchases, is of interest, for presumably if the companies had been hard pressed for cash, no purchases would have been made. It will be seen, however, that in every week with the exception of the week ending November 2, aggregate purchases exceeded sales. The fact that aggregate sales exceeded purchases in the week when aggregate policy loans reached their peak might suggest forced liquidation.

That this is a valid assumption is to be questioned for two reasons. The first is that purchases were made to the extent of approximately four-fifths of the total sales made. The second reason arises out of the fact that the companies may have seen fit to liquidate certain securities to avoid taking losses. There is, of course, the possibility that the companies may have sold highly marketable securities like United States government bonds to meet cash requirements, continuing, however, to direct incoming funds into the customary investment channels. Whatever the reason may have been, the data shown hardly suggest that in this week or

in any other of the periods surveyed was there ever a threatening shortage of cash.

TABLE XXXII

TOTAL AMOUNT OF BONDS AND STOCKS BOUGHT AND SOLD (NOT MATURED)
DURING THE WEEKS FROM SEPTEMBER 8 TO DECEMBER 8, 1929
FOR 11 LIFE INSURANCE COMPANIES¹

Date	1 Bonds & Stocks Purchased During Week	2 Bonds & Stocks Sold During Week	3 Excess Purchases over Sales (+) Excess Sales over Pur- chases (-)
Sept. 8-14	\$ 2,042,640	--	\$2,042,640 (+)
Sept. 15-21	5,162,809	\$ 837,745	4,325,064 (+)
Sept. 22-28	6,313,226	298,219	6,015,007 (+)
Sept. 29-Oct. 5	8,450,985	615,935	7,835,050 (+)
Oct. 6-12	5,978,002	245,700	5,732,302 (+)
Oct. 13-19	8,441,919	780,046	7,661,873 (+)
Oct. 20-26	5,635,875	14,271	5,621,586 (+)
Oct. 27-Nov. 2	13,482,903	8,437,935	5,044,968 (+)
Nov. 3- 9	3,811,639	5,012,700	1,201,061 (+)
Nov. 10-16	5,624,626	4,110,852	1,513,774 (-)
Nov. 17-23	2,695,616	2,850	2,692,766 (+)
Nov. 24-30	1,322,473	412,099	910,374 (+)
Dec. 1- 7	8,204,795	2,856,804	5,347,991 (+)
Dec. 8-14	8,624,231	88,886	8,585,345 (+)

G. Liquidity of Investments and Cash Requirements.

The preceding section has been mainly confined to an examination of the capacity of life companies to meet current obligations from the regular income sources. There is, however, the final recourse to cash through the medium of security liquidation. This may or may not be a final recourse, depending greatly upon whether the securities sold are of a sufficiently marketable character to allow them to be disposed of without loss. In the case of high marketability, they may be sold to secure cash even if the regular income channels may be adequate. At any rate, the forced sale of securities at a loss is in all circumstances the last

¹Source- Poor's Manual of Insurance Company Security Purchases and Sales, 1930.

recourse. To guard against such an eventuality, most companies maintain a portion of their total investments in highly marketable securities, such as United States government bonds. In 1930, United States bonds, including state and municipal securities, represented 4.71 per cent of the total admitted assets of the twenty-seven companies, or an amount equal to \$760,983,000. Thus, in addition to the excess of income over disbursements and the income derived from maturing assets, there would be the sum represented by liquid assets to contribute to the cash bulwark standing in defense against any "run" on the reserves. The total net cash available in 1930, assuming that United States bonds constitute the only liquid portion of the assets, amounted to \$1,989,273,000. With this amount in reserve, policy loans could have increased almost six times over the amount actually placed on the books. This would have raised the ratio of premium notes and policy loans to policy reserves from 18.6 per cent to 37.7 per cent, the latter ratio being almost twice the highest ratio ever recorded. The conclusion must be that, insofar as companies must provide cash for normal current outgo as well as for any emergencies calling for an extraordinary drain on cash, they are in an unusually good position. The fact that the liquidation of portfolios for emergencies is a remote likelihood also lends support to the contention made that market fluctuations need not greatly concern life companies since securities are not and need not be sold to a considerable extent.

CHAPTER VIII

GENERAL SUMMARY AND CONCLUSIONS

A. The Fundamental Investment Policy.

In the introductory chapter of this paper it was suggested that a life insurance company, as an investment institution, occupied a position of considerable responsibility to its policyholders. The companies which control the significant portion of the insurance resources of the country seem to have operated on the conservative basis commonly recognized as proper for fiduciaries and trustees. Thus it appears that the safety of the principal amount of the investment with earnings as large as such safety warrants---a rule generally held to apply as a guide for fiduciaries---has governed to a large degree the investment managers of the life companies.

Commencing with an examination of the classes of securities to which the companies in the aggregate have confined themselves, it was observed that they represented, in the main, high grade bonds and real estate mortgages. But since the investment classes are, for the most part, prescribed by law, this did not in itself suggest that the "independent" investment policy of the companies had been conservative. The latter was rather suggested by the manner in which the companies had diversified in particular ways, of which one was the way in which funds had been proportioned to the different "allowed" classes of investments including the investment shifts noted by the trends. These "independent" operations did, however, point to conservative investment management. To summarize briefly:

1. The Trend of Investments.

In tracing the flow of annual investments one could readily observe that caution and security had governed their direction. Thus railroad bonds were of negligible importance before 1890. After that date, with the stabilization of the railroad industry, companies readily availed themselves of this investment outlet. Similarly, investments in public utilities furnishing heat, light, and power, were more or less beyond the pale before 1920. On the other hand, the rather rapid decrease in farm mortgage holdings since 1924 was seen to have coincided with the corresponding decrease in land values and general farm prosperity.

That the companies have not been unmindful of earnings on

their commitments was also indicated by the trends. This has undoubtedly been one of the several reasons underlying the policy of restraining the flow of funds into railroad bonds since 1906. It has also accounted in good part at least for the increased popularity of public utility bonds and the low relative holdings of government bonds.

2. Geographical Distribution of Investments.

The geographical distribution of the investments in turn gave indications of the degree of care exercised to avoid "risky" commitments. One noted this particularly in connection with farm mortgage holdings. Over 60 per cent of their aggregate value represented loans confined to the West North Central states where farming lands have been most profitably developed. On the other hand, the experimental regions of the southwest have been practically untouched.

The relationship existing between the territorial distribution of the reserves and their investment revealed that adequate yields were sought after. As was seen, the investments in regions relatively rich in capital were far below the amounts drawn from those regions in the form of premium receipts. The New England and the Middle Atlantic states represented those regions, they having never, during the past eight years, received in return, in the form of invested funds, anywhere near the sums paid out to the companies.

3. Diversification of Borrowing Units in Bond Investments.

The study of a sample of seven large companies, having as its object a determination of whether or not these companies were tending to increase the size of loans to individual borrowing units relative to the general increase in the total investments of the class in which they were included seemed to indicate a tendency for increased diversification. This was true of loans to railroads where the average amounts loaned to any single borrower from 1925 to 1930 increased their total investments in each class at a greater rate than was true of increases in the average amounts loaned per borrowing unit.

4. Diversification of Bond Investments According to Maturity Dates.

The examination of the bond schedules of two of the largest companies disclosed a definite policy of apportioning maturities so that approximately 20 per cent of the total holdings would mature at ten year intervals over a period of sixty years and thereafter at about a rate of 5 per cent for each decade until all present holdings will have become due.

The conclusion reached was that distributing maturity dates is a practice generally followed to hedge against the possible loss

due to interest rate fluctuations. Other reasons for distributing maturity dates suggested were the opportunity which such a policy offered for shifting to other forms of investment and the opportunity to regularize the annual flow of cash receipts. The last two mentioned objects would be of greatest significance in periods when economic stringency or other emergencies arise, creating an unusually large call for policy loans or other cash demands. This has been effectively demonstrated during the current depression.

5. Long and Short Term Investments.

For the most part, investment in long term securities appeared to have obtained. The emphasis that has been placed on the importance of long term investments for life companies rests mainly on the fact that companies are in a position to calculate in advance their future cash requirements, thus obviating to a large degree the maintenance of liquid portfolios. The direct advantage would lie in the reduction of expense and possible loss which may accrue from the otherwise frequent reinvestment of funds realized through redemption. This is associated with the advantage earlier noted of spreading maturity dates to hedge against the possible losses arising out of fluctuating interest rates.

6. Marketability of Investments.

It has been generally recognized that life insurance companies require only a portion of their investments in highly marketable securities. Emergencies may require liquidation, but, as was seen, the excess of income over disbursements in addition to the income from maturing investments, is usually adequate to meet the cash requirements at such times. Considering the companies in the aggregate, conclusions reached were that United States bonds, including possibly state, county, and municipal issues, constituted the primary means for securing cash in emergencies. United States bonds, which were held in quantities averaging in recent years less than 2 per cent of the total assets of all companies in the aggregate, in most instances were obviously held for no other purpose than this.

The large relative holdings of railroad and public utility bonds possessing a high degree of marketability suggested that aside from extraordinary disturbances in the security market, the companies did possess investment portfolios that met the most exacting requirements imposed by those who are inclined to stress the importance of marketability in insurance investments.

B. Investment Results - Conclusions.

The investment accomplishment, reflecting the efficacy of investment practices, was shown by the records of earnings and

contract performance. Interest earnings showed a fairly constant rate, varying somewhat with the size of the organizations. A gross rate of $5\frac{1}{2}$ per cent may be said to have been averaged over a decade and a half; this fact itself suggested that conservatism must have ruled in the selection and administration of the portfolios. Such a rate, furthermore, provided by a safe margin the amount required for the reserves.

As to the general record of contract performance, the history of the companies presented perhaps one of the finest marks of business achievement known in this country. The fact that no significant failure causing any loss to policyholders had occurred since the '80's attested to the extreme care and conservatism with which the managements had administered their companies' affairs.

In view of these records, the natural assumption would be that investment policies as they now obtain, laws and company traditions as they are, would see no material modification in the future. It would certainly appear that if the life insurance structure has proved itself as impregnable as such records would indicate, the policyholder has no ground for desiring any change. But are there any facts revealed in the foregoing studies that suggest that this apparently satisfactory record might be questioned in any way? Granting that it is a superior one, and the writer fully recognizes that it is, there would be no contradiction in acknowledging that the investment policies of life companies may not be irreproachable in every respect.

One may point, for example, to the question of a life company's responsibility with respect to the assurance of "purchasing power" security. Much has been said of the importance of achieving safety in investments so that contracts may readily be met at their maturity. But the sense in which this term has been employed has been that of "dollar" security. In no respect has the "purchasing power" element been introduced to disrupt an otherwise satisfactory portrayal of object, method, and results. Clearly, "orthodox principle" does not recognize this fundamental aspect of security. The fact that the difficulties in the way of any plan to deal with it adequately, presumably justifies the position of not attempting to provide such a plan at all. What is more, the very opposition that both law and investment tradition have taken towards any security not considered fit to associate with the "blue blood" class of fixed maturities, even if such blood is beginning to show alarming signs of anemia, would suggest that attempts to adjust investment practices more equitably to the real requirements of the policyholder are rather to be condemned. One sometimes wonders how much inertia rather than intelligent investment analysis or even praiseworthy social purpose lies at the root

of much of the seeming rigorous adherence to the straight and narrow lines layed down by tradition. Admittedly the problem is a challenging one, but this fact alone does not justify the total evasion if not directed opposition to its serious consideration. This, the writer feels, represents one of the principal criticisms which may be properly advanced against the record of life company operation.

Then too, and this is essentially a matter related to the foregoing, one may seriously question if the best interests of the policyholder are served under a system of investment management which specializes in any one class of "eligible" securities to the extent to which many companies have. Granting that such specialization may reflect a particularly strategic position or qualification of the managers in appraising and administering some special investment class and is, to that extent, understandable, yet one may wonder if the unbalanced portfolios which result from such specialization may not at times suggest a serious weakness. It seems clear now that portfolios consisting of from 50 to 70 per cent real estate mortgages reflect anything but effective investment practice. Likewise, a portfolio stuffed with railroad bonds can hardly be looked upon as illustrating a particularly satisfactory investment administration.

To conclude, is it unreasonable to assume that life companies might well consider certain "departures" from the traditional avenues of investment operation? One must concede that the existing system has worked, that the policyholder can, in the main, be satisfied that his interests have been served reasonably well. But this does not invalidate a position which assumes that certain material adjustments may well be considered to the distinct advantage of the millions of policyholders whose interests are so intimately bound up with the continued progress of the life insurance companies.

APPENDIX I-A

THE NAME, LOCATION, AND TOTAL ADMITTED ASSETS
OF THE INDIVIDUAL COMPANIES COMPOSING THE SAMPLE
OF COMPANIES MOST FREQUENTLY EMPLOYED IN THE STUDY

Company	Location	Total Admitted Assets, 1931
Metropolitan	New York, New York	\$ 3,590,115,653
Prudential	Newark, New Jersey	2,692,698,220
New York	New York, New York	1,909,124,242
Equitable	New York, New York	1,400,232,747
Mutual	New York, New York	1,106,236,049
Northwestern	Milwaukee, Wisconsin	977,265,829
Travelers	Hartford, Connecticut	666,491,510
John Hancock	Boston, Massachusetts	621,278,133
Mutual Benefit	Newark, New Jersey	589,980,371
Penn	Philadelphia, Pennsylvania	496,603,266
Aetna	Hartford, Connecticut	440,184,673
Massachusetts Mut.	Springfield, Massachusetts	426,899,036
Union Central	Cincinnati, Ohio	335,355,766
New England	Boston, Massachusetts	267,927,860
Provident	Philadelphia, Pennsylvania	256,407,790
Connecticut Mutual	Hartford, Connecticut	210,124,399
Bankers	Des Moines, Iowa	165,677,027
Phoenix	Hartford, Connecticut	160,163,615
Connecticut General	Hartford, Connecticut	154,095,419
State	Worcester, Massachusetts	149,075,577
National	Montpelier, Vt.	144,508,326
Equitable,	Des Moines, Iowa	128,750,259
Fidelity	Philadelphia, Pennsylvania	98,138,711
Guardian	New York, New York	91,819,757
Home	New York, New York	79,149,251
Berkshire	Pittsfield, Massachusetts	49,583,952
Columbian National	Boston, Massachusetts	42,765,693
Total		17,250,653,131

Appendix I-B

THE TOTAL OF ADMITTED ASSETS OF ALL
AMERICAN LIFE INSURANCE COMPANIES COMPARED
WITH THE TOTAL OF ADMITTED ASSETS OF A GROUP OF 27 LIFE
INSURANCE COMPANIES MOST FREQUENTLY EMPLOYED IN STUDY 1903-1931

Year	Total Admitted Assets of all American Companies	Total Admitted Assets of 27 Companies	Ratio Col. 2 to Col. 3
1903	\$ 2,265,221,193	\$ 2,140,235,077	94.4%
1906	2,924,253,848	2,750,027,235	94.0
1909	3,643,857,971	3,402,841,458	93.3
1912	4,409,292,521	4,111,429,526	93.2
1915	5,190,310,353	4,806,885,140	92.6
1918	6,529,620,899	5,919,519,138	90.6
1921	7,936,496,844	7,072,287,778	89.1
1922	8,652,318,490	7,648,080,541	88.3
1923	9,454,620,793	8,285,596,596	87.6
1924	10,394,034,380	9,069,540,977	87.2
1925	11,537,614,609	10,018,870,302	86.8
1926	12,939,806,809	11,111,986,019	85.8
1927	14,391,850,583	12,349,599,589	85.8
1928	15,961,093,741	13,689,607,085	85.7
1929	17,482,308,607	14,970,691,517	85.6
1930	18,879,611,097	16,134,352,616	85.4
1931	20,159,939,830	17,250,653,131	85.4

APPENDIX II-A

THE NAME, LOCATION AND TOTAL ADMITTED ASSETS
OF 15 MID-WESTERN COMPANIES EMPLOYED IN STUDY

Company	Location	Total Admitted Assets 1931
American Central	Indianapolis, Ind.	\$ 18,530,588
Bankers Life	Lincoln, Nebraska	41,280,288
Central Life	Des Moines, Iowa	38,151,114
Continental Life	St. Louis, Missouri	17,232,567
Franklin Life	Springfield, Ill.	32,248,530
Illinois Life	Chicago, Illinois	41,948,764
Lincoln National	Fort Wayne, Ind.	83,189,326
Midland Mutual	Columbus, Ohio	21,362,075
Minnesota Mutual	St. Paul, Minnesota	27,896,604
Mutual Trust	Chicago, Illinois	30,886,692
National Life, U.S.A.	Chicago, Illinois	56,480,889
Northwestern National	Minneapolis, Minn.	45,920,328
Peoria Life	Peoria, Illinois	23,484,791
Reserve Loan	Indianapolis, Ind.	12,065,918
Columbus Mutual	Columbus, Ohio	21,004,282
Total		511,682,756

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